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## ORIGINAL ARTICLES.

### OTO-MASSAGE IN SUPPURATION OF THE EAR: ITS VALUE FOR THE RELIEF OF DEAFNESS AND IN THE TREATMENT OF THE SUPPURATION.

Read by title in the Section on Laryngology and Otology, at the Forty-seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga., May 5-8, 1896.

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Upon several occasions I have presented various aspects of oto-massage, but, beyond having noted in one of my papers that I considered the deafness occasioned by suppurative disease of the middle ear peculiarly favorable in its reaction to massage, I have not publicly considered suppurative disease in connection with the subject. I have often been asked the value of the method in the deafness and tinnitus, the results of suppurative disease. On expressing my opinion that it was of especial value in both conditions, I have naturally been lead to explain why this was the case.

In considering the value of massage in the treatment of cases of suppurative disease or of the defects from suppurative disease, the subject naturally divides itself into two parts: 1, the consideration of its application and value in cases undergoing suppuration; 2, its importance in those in which the suppuration has ceased, deafness being present with or without tinnitus.

Eliminating for the present all the acute suppurative cases, those attended with extreme pain and swelling of the parts, we will study a typical case of chronic suppurative disease. It will present, in addition to the discharges, which may be meagre or profuse, watery or ropy, colorless, pustular or bloody, a greater or less degree of deafness with or without tinnitus, accompanied usually by a full or swollen feeling within the ear, with perhaps a little tenderness and with occasional attacks of pain.

The usual treatment for such cases has been careful cleansing of the meatus and middle ear, usually by syringing with warm or medicated water, followed occsionally by cleansing with peroxid of hydrogen solution, and then after thoroughly drying the ear with cotton and perhaps using the Politzer bag or the Siegle speculum, or both, the insufflation of some drying or absorbent powder, such as aristol, iodoform or boracic acid. The ordinary mild cases are apt to do fairly well under such routine treatment, especially if it be persisted in, and they often develop a decided improvement in hearing, as well as a marked diminuition and, frequently, an entire cessation of the ear discharges.

In contradistinction to this the dry method is used by many. The meatus is carefully wiped out with cotton, after which, if a probe can be passed through the perforation, the middle ear is cleansed as thoroughly as possible. Then by means of the Politzer air bag and Siegle speculum, the discharges lying low down in the ear are forced toward and through the perforation in the membrane and the middle ear and meatus are again cleansed with dry cotton, after which drying powders are used.

An objection to be urged against the first method above outlined is the syringing of the ear. In my opinion this, in many cases, prevents the cessation of the discharge; the water or medicated liquid finds its way into the deeper parts of the ear and not being removed, lies there and acting as a foreign substance, excites irritation and inflammation in the surrounding tissues and thus increases the amount of the discharge. Of late, the dry method has come more and more into vogue. It has the advantage of removing foreign matters from the ear cavity without subjecting the ear to the possible disadvantages of having the pus replaced by other foreign particles. But both methods fail in entirely removing the exudated materials from the middle ear cavity—the former method washing out much of the discharge and diluting the rest—the latter removing considerable but allowing some of the discharge to lie on the floor of the tympanum, as well as leaving a layer of the discharge adherent to all the surfaces and an especially large amount to remain in the attic and on the ossicular structures. In these cases to remove the discharges which otherwise are irremovable I employ massage instruments, using them as cleansers and dryers of the middle ear cavity. To illustrate this method of using massage I will briefly outline the treatment of an average case of middle ear disease with suppuration. Finding that I am dealing with a case of suppuration of the chronic type, I dry out the meatus with a cotton-covered probe and if the perforation in the drumhead be sufficiently large to allow of it, I by the same means cleanse the middle ear as much as I am able, then by the Siegle speculum I suck out as much of the pus as possible and dry the meatus once more, then I inflate with the Politzer bag and force out a little more discharge, which I remove with the dry cotton. I then apply to the patient a pneumo-massage apparatus of medium strength and gradually increase the suction. I succeed in drawing into the meatus and about the perforation of nearly, if not, all of the discharge which may have adhered to the crypts and along the walls of the middle ear. After drying with cotton, I once more use the pneumo-masseur and again dry, after which I use the drying powders or astringent antiseptics, if any of these be neccessary. If the ear discharge be too thick or too firm for removal in this manner I then soften the discharge by the use of 3 per cent. solution peroxid of hydrogen, after which I proceed as above outlined.

In using the pneumo-masseur for the purpose of

removing the adherent discharges from the middle ear cavity, I try to use it as forcibly as necessary without in any way imperiling the integrity of the structures, especially avoiding the production of any hemorrhage. I have found by experience that I can usually commence with an exhaust pressure of two ounces to the square inch, and gradually increase it to about half a pound to the square inch, often as much as a pound, and rarely up to two pounds to the inch. With an exhaust from half a pound to a pound, the discharges are usually quickly removed, in from three to ten minutes, 300 or less strokes per minute usually sufficing.

Previous to my using the metronomic masseurs, I endeavored to accomplish this same effective cleansing by the use of the Siegle speculum but, necessarily, the results were indifferent. Since I have used the pneumo-masseur in the manner described I find that I can stop the suppuration more quickly than formerly, and often accomplish this result without any therapeusis to the ear whatever. This, however, is not usually the case, and to a considerable extent I rely upon stimulating and drying powders in connection with thorough cleansing and drying.

In acute cases I apply the suction massage just as soon as is possible, believing that adhesions, ulcerations and destruction of the tissues result often from the pressure of the discharge, from its direct corrosive effect and its fermentative results as well as from the progress of the inflammatory affection.

As soon as the pain is sufficiently allayed so that the treatment is bearable, I apply to the ear either the metronomic ear masseur or a little electric suction pump and clear the middle ear of all its discharges and accumulations. By securing a clean surface early in the course of the disease I hasten reparative action and avoid the ofttimes destructive effects of the decomposition of unhealthy pus.

These ear discharges lying in the middle ear, envelop the ossicles, fill up the space between the promontory and the membrane, and generally occupy all possible spaces, gluing all together. As a result of this we have occasioned abnormal adhesions between the ossicles and between the ossicles and the surrounding walls, as well as occasionally ligamentous bands between the membrane and surrounding structures; again, in other cases, the disease results not in a tying together of the various parts, but a rending asunder of normal structures, in ulcerations, necroses and sloughings.

In the one case we have anchyloses, adhesions, abnormal growths and thickenings followed often by sclerotic changes, in the other we have necrotic changes with often loss of one or more of the ossicles or greater destruction of the tympanic membrane or ulceration of the mucous lining of the middle ear with inflammation extending, perhaps, into the mastoid or involving the internal ear. It is on account of these often serious results that there is an urgent necessity for prompt action, with the idea of restoring the parts as soon as possible to as nearly a normal condition as can be attained. It is therefore necessary if anything can be gained by pneumo-massage, to apply it as early as is admissible.

In some cases I have used the masseur during the acute stage of the attack with marked benefit, allaying the pain and for the time being increasing the amount of suppuration and apparently shortening the attack. I presume the reason for this is that much of the pain in these cases is occasioned by the retention of the discharges, the tissues being filled with discharges which, finding no outlet, have commenced to burrow more and more deeply, the infiltration ever extending, and when the pressure from the central inflammatory area is released by means of the exhaust apparatus, the tissues adjoining empty themselves of their contained discharges, thus relieving much of the abnormal tension of the surrounding infiltrated zone, the lessening of the pressure relieving the pain, and the frequent application of the method tending to prevent extension of the inflammation.

From my experience with this method of cleansing the ear, I am convinced that there would be fewer cases of secondary involvement of the internal ear if the practice above outlined was more generally followed. When we consider that the cases of internal ear disease are the most difficult and unsatisfactory with which the ear surgeon has to deal, the necessity of their avoidance is evident. I know of no other measure of relief which exercises such a powerful influence in the avoidance of this complication.

I very much desire to go more deeply into the subject and illustrate it by cases, but I find this to be impossible as I wish to refer to another aspect of the matter, the improvement in hearing brought about by oto-massage in suppurative cases as well as in cases of deafness occasioned by suppurative disease.

Strange as it may seem, I have found in no class of my chronic ear cases such marked improvement of impaired hearing as in those in which the defect was caused by suppuration. Sclerotic changes are rare in these cases until long after the subsidence of the suppurative disease. I will refer to two such cases of deafness, the result of suppurative disease. Two years ago I reported the case of a woman 38 years old who had scarlet fever in her first year. When I saw her the ears were discharging and there was very poor hearing power. After she had been using the massage treatment for some months, not only did the discharge stop, but the hearing improved so much that she had no conscious difficulty in hearing conversation; the watch being heard twenty inches ($\frac{20}{20}$) from the ear. The progress of this case was a steady gain in hearing power from the commencement. From the time of my report to the present there has been no diminution in hearing power.

I will briefly note another case. Miss C. M., 15 years old came to me Dec. 1, 1894, for chronic suppurative disease of the left ear. There was a large perforation and a fair amount of whitish discharge, not very gluey. There was no watch hearing on contact. I treated her ear without massage and succeeded in about four months in stopping the suppuration, but the perforation did not heal. I endeavored during another two months to heal the perforation, without success. The hearing distance had improved at this time to hard contact hearing for the watch. I then endeavored to restore the hearing by means of massage, using the pneumo-masseur, but especially the phono-masseur, neglecting the perforatian, hoping it would heal spontaneously. Now, after ten months of such treatment (one visit per week), she hears the watch at ten inches, the perforation remaining unhealed.

In these cases the two kinds of massage are valuable—the phono to stimulate the nerve, which is more easily accomplished in such cases by reason of the

perforation allowing the sound to be carried more directly to the internal ear—the pneumo-masseur being used to break down adhesions and restore abnormal or diseased parts to more healthy action by reason of the stimulation thus produced.

To indicate the value of phono-massage, the following experiment will serve. April 26, 1896, I tested the hearing of the right ear of Mr. C. M., aged 28, and found it to be for the watch one-quarter inch. His is a case of old suppuration with bone involvement—one which has gone on for twelve or fifteen years and which he thought was incurable. The strong phono-masseur was used on his ear for forty minutes with the result that the hearing for the watch was increased to one and one-quarter inches. This increased hearing usually gradually disappears unless the treatment is regularly applied. If this be done it usually increases, the amount depending on the nature of the case. This immediate increase in hearing is a very frequent experience in my work, and one which I usually secure except where there has been most extensive destruction of the middle or internal ear structures. In dry suppurative cases where I do not succeed in producing an almost immediate temporary increase in hearing distance, my conclusion is that permanent results are very difficult to attain.

In conclusion the facts may be summed up as follows: In acute suppurative conditions, pneumo-massage should be tried and if the application be not too painful it will relieve the swelling and the severity of the inflammatory pain and shorten the attack; the purpose of this suction massage being to remove from the ear all possible suppuration and thus, by relieving the tension, lessening the frequency of ulcerations and necrotic processes and preventing adhesions and deep infiltrations of the surrounding tissues.

In cases of suppuration that have passed the acute stage the pneumo-masseur is to be used for the purpose of relieving the ear of its discharges and for the relief of extreme tension, preventing ulcerations and necroses, as well as to overcome the formation of adhesions and for the stretching, absorption and destruction of these adhesions when formed, and to stimulate the drumhead and its connecting structures to normal, functional action. The phono-masseur is to be used in these cases for the purpose of restoring to the ear nerve and its terminals the normal tone and overcoming the sluggishness to response engendered by inaction and disease.

In cases of deafness following upon suppurative disease the pneumo-massage is useful for limbering up the diseased and stiffened tissues, to restore their normal action and tone, and to break or stretch abnormal adhesions, to overcome anchylosed joints and give to the ossicles their normal motion, while at the same time improving the circulation of all the middle ear structures—the phono-massage being again used for its effect upon a sluggish, diseased and non-responsive nerve ending.

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**Intravenous Injections of Sublimate in Ocular Affections.**—Angelucci has found rapid and thorough recovery follow the use of intravenous injections of 20 centigrams of sublimate and 60 centigrams of chlorid of sodium, in 100 grams of distilled water. The dose increasing from 2 to 16 milligrams. The cases favorably affected were all of syphilitic origin: Iritis, irido-choroiditis, papillo-retinitis, etc., but the results were negative in all non-syphilitic troubles.—*Revue Gen. d'Ophth.*, August 31, from *Arch. di Ottalm.*, No. 3.

## STRICTURE OF THE UPPER PORTION OF THE TRACHEA SUCCESSFULLY TREATED BY DIVULSION THROUGH THE LARYNX.

Read in the Section on Laryngology and Otology, at the Forty-seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga., May 5-8, 1896.

BY JOHN O. ROE, M.D.

ROCHESTER, N. Y.

The following case of stricture of the upper part of the trachea, due to organic contraction, can not, on account of its rarity, fail to be of interest.

On November 23, 1895, Miss D., aged 27 years, was referred to me on account of frequent and urgent attacks of dyspnea, which had for a considerable time been exceedingly distressing to her. She gave the following history: In March, 1888, she had a severe attack of diphtheria, from which it was thought at the time she had fully recovered. During the following year, however, it was noticed that she had edema of the feet. The edema was found to be associated with albuminuria and was ascribed to that cause. Notwithstanding this she enjoyed a fair degree of health.

In October, 1890, she became hoarse nearly every day as evening came on. This hoarseness continued until December, when she began to have considerable difficulty in breathing. The family physician found a swollen condition of the larynx, which he regarded as a consequence of the albuminuria. He treated her with steam inhalations, compelling her to remain in bed for about three months continuously with the object of maintaining a uniform temperature and preventing her from contracting cold. During this time her health was very good and she gained ten or twelve pounds in weight; although she had one or two severe attacks of dyspnea, lasting three or four days at a time. These were attributed entirely to the renal disturbance, since albumin and casts were found in the urine.

After a time the dyspnea subsided and in April, 1891, she began to go out. Shortly after, however, she took cold, and had another severe attack of dyspnea, lasting several days. As warm weather came on her dyspnea disappeared. Her voice during the period, since her first attack of hoarseness, had remained quite clear.

In August, 1891, she went to Canada and remained there until fall, feeling quite well. She continued to feel quite well during the fall, but during the winter she had frequent attacks of dyspnea, very similar to those of previous winters. During the following summer she had no special difficulty in breathing, although during July, August and September she was aphonic.

During the fall of 1892, she had at times much difficulty in breathing, and that winter she spent in Southern Pines, South Carolina, where she gained much in general health. Her breathing, however, was not materially improved, although the atmosphere there was remarkably dry. She came home May 1, 1893, and during the following summer was quite well, having little or no difficulty in breathing.

During August the cartilaginous portion of her nose began to diminish in size and for about a year afterward there was a gradual settling of this portion of the nose. During November, 1894, she had inflammation of the right lung, which nearly proved fatal and very much increased her difficulty in breathing.

During the following winter her dyspnea was frequently very urgent. These attacks of dyspnea were aggravated very much by accumulations of mucous below the obstruction in the trachea, which she had great difficulty in expelling. After expulsion of these accumulations her respiration was for a time very much improved. As the warm weather came on, her dyspnea diminished, and during the summer of 1895 she was quite free from it, and felt very well. As in previous years, when the cold weather came on, her trouble increased, and last October her dyspnea became very urgent, although her voice remained quite clear.

On November 23, when she came under my care, there was found on examination a chronic subglottic laryngitis, with considerable infiltration of the subglottic region. About three-fourths of an inch below the larynx there was an annular constriction, which appeared something like a membranous formation. Notwithstanding the fact that no history of syphilis could be obtained, as the girl's character was beyond question, the sinking in of the nose appeared more or less positive evidence that the trouble was of a specific nature.

Previous to the time that her nose began to diminish in size, her dyspnea was attributed entirely to the albuminuria, and she was treated accordingly; but after this manifestation it was thought that a specific trouble must be the cause of the difficulty. Since it seemed so certain that it must be of that nature, I placed her upon an antisyphilitic treatment, in both large and small doses, but with no benefit whatever. In fact, the dyspnea was aggravated by it, whereas iron and strychnia improved her condition.

Locally I attempted to reduce the subglottic laryngitis by sprays and insufflation of a power composed of tannin, sugar of milk, and a small quantity of morphia. This appeared to lessen the subglottic congestion, but had no effect in lessening the constriction in the trachea.

On December 4, the dyspnea became so urgent that suffocation seemed imminent, necessitating either tracheotomy or intubation of the larynx. The latter was resorted to and the tube was retained for two days, when it became so irritating as to require removal. It had the effect, however, of so enlarging the constriction that the dyspnea for a considerable time entirely disappeared. The constriction gradually returned, and in February it again became necessary to introduce the tube.

As the tube was being introduced by the aid of the mirror, she suddenly threw her head forward, bringing the end of the tube quite forcibly against the anterior portion of the trachea. As she jumped back, the tube was brought out. She at once, however, experienced complete relief from her dyspnea, and on the examination of her larynx, I found that the tube had broken down the anterior portion of the constriction so that the lumen of the anterior portion of the trachea was quite free.

Seeing that this constriction could be disrupted, I introduced a pair of Grant's forceps, with blades closed, until they passed below the constriction. I then opened the blades until the widest portion of them nearly filled the trachea. Holding the handles firmly I drew the blades up in the constricted portion, so dilating it as to break down much of the posterior portion of the constriction and leave the trachea quite free. As the glottis did not permit the forceps to open wide enough to fully break down the stricture, I had a pair of dilating forceps with double-jointed blades so constructed as to increase the expansion of the lower blades to the full width of the trachea and to completely obliterate the stricture.

Since that time the constriction has shown little or no tendency to return. An occasional dilatation of the trachea with the forceps is sufficient to maintain the opening. The respiration and voice are quite normal. By following up the dilatation of the trachea in this manner when there is a tendency of the constriction to return, I have every reason to believe that a permanent cure will be effected.

This has been to me an exceedingly interesting case, being one of chronic subglottic laryngitis, to which was added organic constriction in the upper part of the trachea. This case is of special interest on account of the uncertainty as to the exact cause of the condition, and also on account of the history of repeated attacks of dyspnea extending over so long a period.

How much of this trouble we may ascribe to albuminuria, it is difficult to say. We all recognize the condition of edema of the larynx and aphonia, associated with albuminuria, which we term albuminuric aphonia, and we know that specific taints uncontrolled by ordinary antispecific remedies may excite all sorts of conditions. Subglottic laryngitis is a disease that is not of frequent occurrence, and is therefore not commonly met with in our daily work. We know, however, that its cause is frequently involved in obscurity, although it is usually associated with lymphatic affections and the conditions termed scrofula; that it occurs usually in young females from fifteen to twenty-five years of age, and that the treatment which proved serviceable in this case is the one that is recognized as the most beneficial in simple chronic subglottic laryngitis. Simple absorption of the tissues of the nose without ulceration results only, so far as I am aware, from a specific cause. We must therefore believe even in the absence of every other manifestation that the underlying cause was a latent hereditary taint of a specific character which produced the subglottic laryngitis and ulceration of the upper portion of the trachea and the resulting stricture, as well as absorption of the tissues of the nose.

DISCUSSION.

DR. J. E. LOGAN, Kansas City, Mo.—Is it not probable that this case is more or less of a specific type? The Doctor states that it was simply a settling of the cartilaginous septum unattended by any ulceration, and that the bony septum was intact. This would make it a very peculiar and interesting case. I have seen many of those cases which had no evidence of external ulceration, but there would be an ulcerated condition of the septum.

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## A FEW REMARKS ON THE CLINIC USE OF ORTHO- AND PARA- CHLORO-PHENOL.

Read in the Section on Laryngology and Otology, at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

BY CONRAD BERENS, M.D.

ONE OF THE WILLS HOSPITAL SURGEONS. PHILADELPHIA, PA.

In the *University Medical Magazine* for October, 1894, there is a brief note of reference to ortho-chlorophenol, quoting N. Simanoffski, who is reported to have used it for reducing hypertrophies of the mucous membrane overlying the inferior turbinates of the nares. Simanoffski made but a preliminary report, and referred also to para-chloro-phenol. The endorse-

ment of ortho-chloro-phenol was of such a nature that I was induced to make some trials with it, as well also as of para-chloro-phenol. Ortho-chloro-phenol is a heavy limpid liquid of exceedingly irritating and pungent odor. It is rapidly soluble for clinic purposes in glycerin, and from this may be reduced in strength again and made soluble in water. For clinic purposes the para-chloro-phenol, which occurs in amorphous crystals, is best used by fusing to the end of a probe. In my work I have fused the crystals to silver. Para-chloro-phenol is not so satisfactory clinically, and is very much more cumbersome and inconvenient in its application. The conclusions of Schourmo in regard to its irritating properties, particularly in laryngeal conditions, are fully borne out by clinic experience. There is no denying the correctness of the statement of Spengler (*Brit. Med. Jour.* 1896, No. 1,827), as to its antiseptic properties, but I would take issue with him as to its efficacy compared with ortho-chloro-phenol. My experience having taught me that the latter is just as active an anesthetic, and is a very much more convenient form for clinic purposes. The use of ortho-chloro-phenol for the reduction of engorgement of the erectile tissue overlying the inferior turbinates is much more satisfactory than the cautery—with less destruction of tissue and less intense reaction. In acute engorgement of the erectile tissue, I have found nothing more satisfactory than its application by means of a small dossil of cotton dipped in the drug and applied anteroposteriorly to the parts after they have been prepared by the use of cocain. The effect of the cocain having passed off after the thermo-electric cautery has been applied, patients as a rule complain of intense pain, and frequently of epistaxis, not to mention the enormous inflammatory swellings and frequent adhesions to the septum. Ortho-chloro-phenol is slightly anesthetic, and this anesthesia is more persistent than that of cocain. As a consequence after the action of the cocain has passed off that of the ortho-chloro-phenol continues, and the patient reacts without any inconvenience. There being less inflammatory reaction it is natural that there should be less deeply seated initial lesions, but the drug has no place in the treatment of true hypertrophy, or hyperplasia of the region under discussion. In ulcerous conditions more especially of the septum nasi, the application of the glycerole of ortho-chloro-phenol 10 per cent. has invariably proved satisfactory in my hands. In ozenatous conditions after freeing the nares from the offensive accumulations, and thoroughly cleansing the nasal mucous membranes with dry absorbent cotton, I have found nothing that will so quickly remove the offensive odor of the disease as two or three applications of 10 per cent. ortho-chloro-phenol in glycerin. In these cases I persistently but very gently rub the solution over the diseased parts, and the patient is much gratified by the sudden removal of the offensive odor of the disease. I have yet to see however a case cured by the application of this or any other drug; that is, having no longer necessity for any applications to the nares. In laryngeal conditions I found that it will not in any sense take the place of ichthyol or iodoform as a local application. If a caustic effect is required, as for instance upon deeply seated ulcers or upon granulations in the pharynx, it is not to be considered, as its effect is too mild to be taken into consideration. In laryngeal diseases the results of persistent application have not lead me to resort to its use exceeding in the event of failure of lactic acid, ichthyol or boro-glycerin. In three out of fifteen cases of laryngeal tuberculosis in its very incipiency, I have found ortho-chloro-phenol, in full strength, to give better results than any other local application. In two instances, most gratifying results were obtained by the application of 10 per cent. ortho-chloro-phenol to large ulcers of the epiglottis, both occuring in cases of advanced tuberculosis.

For the removal of growths of any sort in the larynx, I would not encourage the use of the drug, as it is not only slow, but also liable to cause acute inflammatory reaction—in one instance, giving rise to very severe dyspnea. In aural diseases its use has been attended by more gratifying results than those gained by the use of any other drug. The application of a pledget of cotton saturated with the 10 per cent. of the glycerol of ortho-chloro-phenol to an incipient furuncle of the external canal, in many instances has resulted in the abortion of the disease, while no dressing has proved more satisfactory after I have been compelled to open the furuncle in the canal. Though I have used a dossil of cotton saturated with it as a dressing after opening the furuncle I have never yet seen a recurrence of the disease at a sufficiently early date to warrant me in believing that there had been any material allowed to remain in the ear disinfected. A small pledget of cotton saturated with the solution and applied to the point of attachment after removal of polypi of the external canal, has always proved effectual both in destroying the extremely offensive odor, and in encouraging a rapid healing of the parts. In suppurative otitis media it has proved exceedingly effectual in 10 per cent. in glycerin. I will cite but one case as an illustration of many. Miss E. M., aged 22. applied to me in July, 1893, with chronic suppurative otitis media of the right ear; more than two-thirds of the inferior portion of the membrana tympani had been absorbed. The suppuration had continued with more or less severity and an offensive odor, since the early childhood of the patient. I employed every method for the relief of the symptoms and checking the disease, even curetting the floor of the middle ear, where the disease seemed to be confined, the attic not appearing to be involved. Boro-glycerin in 50 per cent. solution, ichthyol, nitrate of silver, zinc, nitrate of sanguinaria, douches, powders as iodoform, aristol, etc., were used without result. The discharge continued to be offensive and muco-purulent in character, no matter how thoroughly the application at the previous visit had been made. In December, 1894, after having thoroughly cleansed the parts I inserted a pledget of cotton saturated with 10 per cent. ortho-chloro-phenol in glycerin. The patient was instructed to return the following day. To my surprise the entire appearance of the parts had changed, the mucous membrane had become more healthy in appearance, and the discharge had lost its odor and golden yellow color. In five days and after three applications the discharge entirely ceased, and has not recurred since, excepting in the spring of 1895, when the patient was attacked by an acute rhinitis, and three days afterward complained of discharge from the ear. A single application of ortho-chloro-phenol caused this to cease after twenty-four hours, and there has been no discharge since. The patient as a rule complains of considerable burning pain on the first introduction of the cotton saturated with the

drug, but this rapidly subsides and leaves a sense of comfort. It has been my custom to dress the ear daily, or not later than every other day, and in no instance of chronic suppurative otitis media have I had any but the most gratifying results in its use. In acute suppurative otitis media I have found that in any strength it seems to aggravate the disease. The greatest objection raised to the use of the drug comes from the patient, who complains of its odor. Even weak solutions of the drug unquestionably give rise to an all-pervading and pungent smell that is more penetrating than that of iodoform. This objection, particularly in the application of the drug to the ear, may readily be overcome by closing the external meatus with a small piece of absorbent cotton. In conclusion then, I have no hesitation in recommending the further clinic use of ortho-chloro-phenol in the belief that it will prove a valuable addition to the pharmacopeia of the rhinologist and aurist, and prove itself worthy of the fullest confidence, especially in those cases where the commonly resorted to medicaments have not only failed to relieve the patient, but have disappointed the expectations of the surgeon.

## THE ELECTRO-CAUTERY SNARE AS AN EXCISING AGENT IN DISEASES OF THE NOSE AND THROAT.

Read in the Section on Laryngology and Otology at the Forty-seventh Annual Meeting of the American Medical Association held at Atlanta, Ga., May 5-8, 1896.

BY HANAU W. LOEB, A.M., M.D.

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ST. LOUIS, MO.

It is only a natural sequence which impels one who has given the electro-cautery snare a trial for the treatment of one of the various conditions for which it is recommended, to extend its application, to find new uses and to confirm those whose work has forced them to admit its growing utility. Especially is this to be expected in view of the recent improvements in electric appliances.

At the meeting of the AMERICAN MEDICAL ASSOCIATION at Detroit in 1892, I presented an electric snare which[1] I had devised, and stated its indications and uses in nose and throat diseases. Since that time I have, by greater opportunity, enlarged its sphere of usefulness and fixed my own views in favor of a wider range of application of the electro-cautery snare in nose and throat affections. From its very nature it is adapted for amputation or excision. Any organ or growth or portion thereof which can be engaged within the snare may be removed, without danger of hemorrhage, for not only will there be less hemorrhage than when a knife or cold snare is used, but absolutely no bleeding in the vast majority of cases.

The snare, which was exhibited before this body four years ago, I again present though it is unmodified, except, that in order to accommodate the increasing field of application, it has been made in two sizes. By reason of its ready separation, its simple construction and its constituents, it is easily cleaned. Being covered with hard rubber it is not open to the objection which the old time snares received on account of their lack of cleanliness.

Until over three years ago, I relied upon the ordinary galvanic and storage batteries, without complete satisfaction; constant attention was required to keep them in order and even when the greatest care was observed the battery would often fail at the critical moment.

In December, 1892, I began to use the Aloe converter and since that time I have never been subjected to any annoyance on the part of the appliance supplying the current. The converter is applicable only to the alternating current and is similar in its design and purpose to the transformers which are now used to reduce electricity of high electro-motive force to a lower tension.

The instrument which I have, reduces the voltage from 104 to 1, 1½, 2, 3, 4, 5, 6, 7, or 8 volts, and is therefore suitable for the cautery or the light.

In construction, it consists of iron core with a large primary coil of fine wire and a smaller secondary coil. The ratio of turns of the wire in the primary and secondary coil will depend upon the transformation required. Thus when the voltage of the house current is 104 to secure one volt the primary would have 416 turns to 4 of the secondary; for 2 volts the ratio

would be 416 to 8, for 4 volts, 416 to 16; for 8 volts 416 to 32. From 4½ to 6 amperes are required for the proper action of the snare with No. 5 piano wire (⅓ mm. in diameter).

Lichtwitz[2] describes a fairly elaborate instrument which he uses and which he presents as one by means of which the quantity of electricity may be measured. He finds that ten amperes are necessary for ordinary tonsils and twelve for the larger, when the wire used is ½ m.m. in diameter.

There are several very good appliances in use for utilizing the constant current which alone is available in some cities.

It therefore follows that at the present time no one need deny himself the use of the electro-cautery snare on account of electricity producing apparatus; for, whether the current be alternating or direct the supply will be reliable and precise. For some years a valid objection was entertained to the platinum wire on account of its lack of firmness. Since iron or steel wire has replaced it however, the same degree of stiffness of the loop is obtained whether the cold or hot snare be used.

The electro-cautery snare is from the very nature of things of but recent use. So far as I can learn Middledorf [2] was the first to employ it in the removal of tonsils.

According to Kijewski and Wroblewski [4] the galvano-cautery snare was used by Koehler and Korzeniowski [5] to remove a large polypus which filled the entire nasal cavity. Voltolini, [6] in his great treatise upon the galvano-cautery considered the value of the snare lessened by reason of the insufficiency and inconstancy of current.

Since the publication of this work and especially since the introduction of an apparatus which provides for the regular and certain supply of electricity, this and the somewhat similar objection of Beverly Robinson [7] are answered. So satisfactory has been this answer that the advocates of the electro-cautery snare have increased immensely, until they include many who are willing to replace by it many operative procedures which legend and practice had almost established forever. In fact the most enthusiastic advocates are those who have had most experience with it and its greatest opponents are generally those who have used it infrequently or not at all.

Thus Sendziak [8] complains that Jurasz, after employing the electro-cautery snare in only two cases, came to the conclusion that it was inconvenient, painful and disagreeable to the patient on account of the odor it leaves.

The electro-cautery snare has been recommended and employed in the following diseases of the nose and throat:

1. Nose: *a*, anterior and posterior turbinal hypertrophies; *b*, polypi and other benign growths; *c*, malignant neoplasms; *d*, spurs.

2. Rhino-pharynx: *a*, polypi; *b*, fibromata.

3. Pharynx: *a*, hypertrophied tonsils; *b*, tonsillar neoplasms; *c*, palatal neoplasms; *d*, elongated uvula; *e*, hypertrophied lingual tonsils.

4. Larynx: *a*, neoplasms.

### I. NOSE.

1. *Anterior and posterior turbinal hypertrophies.*—In these conditions the electro-cautery snare is almost ideal, permitting the operator to remove quickly the redundant and hypertrophied tissue by means of an operation which is bloodless notwithstanding the great vascularity. It is quite as easy to engage the hot as the cold snare and the celerity, the painlessness and freedom from hemorrhage should commend the former over the tedious cold snare.

Sajous [9] prefers the electro-cautery snare for posterior turbinate hypertrophies, stating that it is necessary to use a rhinoscopic mirror in order to see the seat of operation. I consider that this is not only unnecessary, but awkward. A far better plan is to place the finger in the rhino-pharynx and thus guide the loop over the hypertrophied tissue.

McBride [10] says it should be used whenever the tissue can be engaged and Greville MacDonald [11] prefers the electro-cautery snare for the removal of large pieces of the turbinated in spite of the objection that it induces considerable inflammation in the neighborhood from the generation of steam and that the cicatrization is delayed. I can not permit this objection to go unchallenged for at least in my own cases it has not been revealed. Among the laryngologists who consider the cold snare as superior for anterior and posterior hypertrophies, may be mentioned Onodi, [12] Zwillinger, [13] Polyak, [14] Eaton, [15] Hack, [16] while Baumgarten [17], Schmidt [18] and others commend the hot snare.

2. *Polypi and other benign growths.*—The essential advantage of the electro-cautery snare in the removal of polypi is the fact that so many may be removed at one sitting; whereas it requires considerable time to dispose of a number by means of the cold snare; with the hot snare it is only the question of a few minutes. The smaller instrument which I have devised is quite as convenient and easy of application as any cold snare, and one needs only inquire of a patient who has had both methods applied, to learn that the hot snare is far more agreeable, less painful, more rapid, less bloody and more preventive of recurrence. So far as the inflammatory and infective sequelæ are concerned after a thorough trial of more than four years, I am convinced that they are no greater in one than in the other. In one single case, an acute otitis media followed the separation, doubtless influenced by the unwarrantable exposure to which the patient subjected himself. The operation was performed in the morning and before night the patient had permitted himself to be drenched by rain several times. He failed to report at my office until the fourth day after the operation. I feel therefore that the hot snare may be held blameless of this result. Surely the lessened time of operation should make infection less apt to occur than with the cold snare with which too often no aseptic and antiseptic precautions are taken.

McBride [10] in this connection makes the assertion that it is better to use the electro-cautery snare, when it is desired to remove all the polypi at one sitting. Ingals [19] uses the electro-cautery snare but prefers the cold, while Greville MacDonald [11] claims that there is no advantage over the cold snare, while there is the greater disadvantage of inflammatory action induced by heat and steam generated by the hot wire.

In answer to this, it may be stated that the heat and steam which MacDonald and others claim are generated will not produce any bad results if the snare is properly applied and used. If the wire is drawn tight the tissue which is influenced by the heat will be so constricted and the time of its application so insignificant, that it can have but little influence in this regard. It is often difficult, sometimes impossible, to observe the cauterized stump, demonstrating that at least in many cases the effect of the heat and steam is *nil*.

Schmidt [18] states that after using the cold snare for three years he returned to the electro-cautery. This, I am sure, will be done by many if they give the latter a fair trial. I am inclined to agree with Ball [20] and others that cauterization of the base resulting from the galvano-cautery ablation of polypi is productive of good results. In keeping with the progress of rhinology, I do not believe that mere cauterization of the base will prevent recurrence. Indeed my common practice now is to remove all larger polypi with the hot snare, and if the bone is found affected the smaller polypi with the diseased bone are then removed.

The electro-cautery snare is also available for the removal of other benign growths in the nose, and I have used it with good effect in fibroma, adenoma and papilloma. In one case of fibroma which projected from the rhino-pharynx, the vascularity was very great, the growth bleeding upon the slightest provocation; yet, the electro-cautery snare caused the loss of but a few

drops of blood. In the case of adenoma I first used this instrument but in the later recurrences abandoned it, since on account of the softness of the tissue and slight amount of blood which was lost, I could operate quite as well with forceps.

Zarniko[21] inclines to the cold snare for removal of inflammatory fibroma, claiming that if it is applied as he suggests, the loss of blood will be inconsiderable.

3. *Malignant tumors.*—The electro-cautery snare has in this class but a limited range, which is in the direction of securing a portion of the growth for microscopic examination.

4. *Spurs.*—Although advocated by a number of laryngologists, I have never taken kindly to this form of treatment. The saw, drill and curette are eminently more satisfactory. The electro-cautery snare is by no means as free from objection in operations upon bone and cartilage as upon softer tissues.

II. RHINO-PHARYNX.

1. *Polypi and fibromata.*—These may well be considered together as the terms are used interchangably by many. In appropriate cases the belief seems to be fairly general that the hot snare is of greatest service, although the electrolytic treatment seems destined to overshadow all other forms, except where a more serious operation is indicated. However, many still maintain the superior value of snaring where this is possible. Thus Michelson[22], Lincoln[23], and Schmidt[26] report cases of rhino-pharyngeal fibroma treated in this way. I have used the electro-cautery snare in two cases of rhino-pharyngeal polypi with success and without return. In a case of rhino-pharyngeal fibroma with projections into the nasal cavity I snared off as much as was possible to reach with the instrument. On the whole the efficiency of the electro-cautery snare in rhino-pharyngeal tumors depends upon the possibility of engaging the growth in the loop and its extent and attachment.

III. PHARYNX.

1. *Hypertrophied tonsils.*—In the removal of hypertrophied tonsils, the electro-cautery snare has received greater attention than in any other affection. After this method was introduced, according to Lichtwitz[2] the operation lost caste but was revived through the writings of Knight, Loeb, Garel, Schmidt, Heryng and Sendziak. All of these continue to favor the electro-cautery snare except Knight, who writes[24], after a complete résumé upon the subject of hemorrhage following tonsillotomy that he favors the guillotine.

Flatau[25] intimates that those who have experienced serious hemorrhage after tonsillotomy are much inclined to replace the tonsillotome with the electro-cautery or electro-cautery snare and McBride[16] states that its use is only justifiable in preventing hemorrhage, which he states is a rare contingency. Bresgen[26] dismisses its consideration with the remark that there is no reason for its use as it does not prevent hemorrhage. Bosworth[27] objects to the procedure on the ground that it requires ten to fifteen minutes and Potter[28] advised that the snare be not adjusted too deeply on account of the sloughing beyond the seat of cauterization.

Ingals[19] favors the cold snare. On the other hand there is a great array of experienced advocates of electro-cautery tonsillotomy. Lichwitz[2] is strong in his preference. Yerwant[29] states that it is more prudent to use the electro-cautery snare in adults so as to obviate hemorrhage. Heryng[30] has given his evidence in its favor for hard fibrous tonsils, extensive hypertrophy and hemophilia. Sendziak[18] advocates it forcibly and conclusively, stating that any one without prejudice will be entirely satisfied with this method. Schmidt[18] favors the electro-cautery snare beyond all other tonsillotomy instruments. He denies that it requires a longer time than the operation with the tonsillotome and insists that it is to be preferred on account of the certainty that hemorrhage will not occur. Huguenin[31] advises the use of the electro-cautery snare whenever tonsils are pedunculated and Helot[32] also prefers this instrument. There is to my mind no question as to the safety of galvano-cautery tonsillotomy so far as hemorrhage is concerned. A few cases of hemorrhage following this operation have been reported, but never a serious one. They could all probably be explained upon a satisfactory basis. In more than 300 tonsillotomies with the electro-cautery snare I have nerver observed a loss of more than a few drops of blood. In only one case was there a secondary hemorrhage, which doubtless resulted from a lack of attention on the part of the patient. I think this will compare favorably with the experience of those who use the knife or tonsillotome. In fact the proof is stronger when it is considered that the hemorrhage would be far greater if the advocates of the knife would remove as much as is ordinarily removed with the galvano-cautery snare.

Numerous instances of hemorrhage after tonsillotomy attest to the possible seriousness of such an occurrence. Heryng[30] collected fifty-nine cases of severe and even serious hemorrhage; other cases have been reported by Blairs,[33] Fuller,[34] Catuffe,[35] Moure,[36] Thorner,[37] Jessop[38], and Lennox Browne.[39]

Another great advantage which the galvano-cautery snare possesses over the tonsillotome consists in the large amount of tonsillar tissue which it is possible to remove and the precision of the operation which makes it possible to remove just what one desires. With the tonsillotome the amount of tonsil removed is purely accidental. If the instrument possesses a fork or lifting device, the amount will depend upon the pulling power of the fork, which to the surgeon can not be known until after the excision. If there is no fork, the pillars of the palate will limit the removal, and therefore it must be very exceptional to remove the entire tonsil. Quite different is it with the electro-cautery snare. It is my custom to pull the tonsil from its palatal bed by means of a pair of sharp-toothed forceps and then engage the wire so that it is possible to remove the entire tonsil. I have again and again made so complete an excision that not a vestige of tonsil tissue remained. This I do not consider a dangerous practice; at least it has been eminently satisfactory up to the present time. I can corroborate the experience of Schmidt,[18] who states that he has frequently seen enlarged tonsils of which one-fifth only had been removed by previous tonsillotomy.

As to the great length of time which some writers maintain is necessary in operating with electro-cautery snare, the expression is born of inexperience, for no one who undertakes it a number of times can fail to acquire sufficient dexterity to operate with celerity. It never should require more than one minute, providing the apparatus is in proper working order; considering the improvements that have been made, nothing short of this is to be anticipated. On the whole it must be admitted that the electro-cautery

snare is to be commended for the removal of hypertrophied tonsils in that it obviates all danger from hemorrhage and makes the operation one of precision, not one of the purest guess-work.

Even in tonsils which are impacted between the palatal pillars it will be found of service, since in almost every case it will be possible to pull out a portion and engage it in the snare, thereby not only securing the advantage of cauterization, but also the removal of a portion of the hypertrophied tissue.

2. *Tonsillar neoplasms.*—Any tonsillar growth which has not involved and attached itself to neighboring structures is susceptible of excision with the electro-cautery snare. This does not imply that the mere removal with the snare will constitute a cure for such an affection. However, if the growth involves the tonsil alone, and the entire tonsil is removed, the method should offer at least as good a result as any other. In a case of lymphosarcoma of the tonsil I snared off a large piece of the tumor for microscopic examination, without causing any hemorrhage and without influencing the growth of the tumor. Wolfenden[40] states that he removed a sarcomatous tonsil by means of the electric snare, and I consider it a procedure which should be utilized in the earlier cases.

3. *Palatal neoplasms.*—Tumors of the palate which may be engaged within the loop are suitable for removal with electro-cautery snare. I have used it twice for palatal papillomata.

4. *Elongated uvula.*—In my previous paper[1] I called attention to removal of elongated uvula by means of the electro-cautery snare, which I had practiced for some time. Shortly after this DeBlois[41] in a paper before the American Laryngological Association, took a similar position. Lennox-Browne[42] states his preference for the galvano-cautery where the uvula is thin, but he does not specify the snare. He operates by pulling the uvula downward and cutting it with the galvano-cautery where he desires. On the other hand Morgan[43] and Ingals[19] prefer the cold snare. That hemorrhage is a possibility, one needs only to refer to the paper upon this subject written by Morgan[37] in which attention is called to a great number of instances of uvular hemorrhage collected from ancient and modern medical literature.

Besides entirely preventing all possibility of hemorrhage the hot snare operation finds an indication in the ease with which the uvula can be engaged, the perfect stump which remains, the smaller amount of pain succeeding the operation as compared with ordinary uvulotomy. It is my practice after the uvula has been properly cocainized to permit it to fall into the loop and after deciding exactly where the section is to be made, to draw the wire tight and send the current through. So pleasing are the results from this method of operating, that I now use no other plan.

5. *Hypertrophied lingual tonsil.*—My own experience in this particular affection is confined to one case; however, it seems to offer an inviting field at least. Sendziak[8] commends it highly.

### IV. LARYNX.

1. *Neoplasms.*—Some writers are disposed to favor the electro-cautery snare in these affections, but it seems to me that there are serious objections on the score of inaccessibility, impossibility of keeping the site in perfect view, the danger of inflammatory reaction and the possibility of the excised tumor falling into the larynx. These are, however, the judgment of opinion rather than of experience.

In conclusion I desire to state that the electro-cautery snare has a possible indication in laryngeal tumors and nasal spurs; an inviting one in hypertrophied lingual tonsils, palatal, tonsillar and rhinopharyngeal growths and a certain one in the removal of hypertrophied tonsils and turbinates, nasal polypi and elongated uvula.

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### DISCUSSION.

DR. W. E. CASSELBERRY, Chicago, Ill.—I think the success of treatment by the electro-cautery snare depends very largely upon the perfection of one's apparatus. I think that Dr. Loeb deserves a great deal of credit for having designed an apparatus by which he can gauge and perform these operations with facility. He is fortunate in having his converter and an alternating current. I have been unable to find a satisfactory galvano-cautery rheostat by which to use directly the Edison or continuous current, so I use the storage battery. I use for this purpose the double American cell, keeping it stored constantly by the Edison current in connection with my light so that the flow of the current from the battery seems to be uniform. I am not accustomed to take out nasal polypi with the cautery snare. I formerly did it but have stopped for the reason that it makes the nose sore. I can remove about as many as I care to at one sitting with the cold snare. I remove tonsils in adults sometimes by the cautery snare. It has the advantage of avoidance of hemorrhage and the disadvantage of making a very sore throat. I think, to remove the uvula by the cautery snare, I must make a more painful wound than by the usual method.

DR. HANAU W. LOEB, St. Louis, Mo.—I expected to hear more criticisms than have been made and I think perhaps they

would have been deserved, for I am sure that my love for the electro-cautery snare has made me rather dogmatic. I use a better instrument than those usually employed. Most of the instruments have too large a handle and are too heavy, but I have somewhere in the gray matter of my brain a little handle in view which will greatly obviate this trouble.

I think Dr. Casselberry deserves a great deal of credit for his faithful work with that abominable machine, the winding cautery snare. I use the McIntosh handle, which has a sliding arrangement by which the loop is tightened in a moment.

It is unfortunate that in so many cities the direct current is still used. Since the consolidation, however, of the Edison and Thompson companies, they are not using them so much, and soon the alternating current will be utilized in all of the larger cities. In reference to trouble from cauterizating the adjoining part, if the wire is drawn tight before sending the current through this will be obviated. The trouble with the instruments is that you have to pass the wire through the cannula and then back again. In mine there are two perforated wires which are threaded like a Sajous snare.

There is no question but that in many cases the inflammatory reaction from the electro-cautery is greater than the cold snare, for the reason that the surface is free from all germs; since I have become more familiar with the use of the instrument I have severe inflammatory results less frequently. It is the best in operating upon the uvula because one is not required to pull down the tip in any way. I simply let the uvula fall into the tip and turn on the current. In the scissors operation you are apt to cut off more than is necessary of the mucous membrane, and in addition the inflammatory results are greater. I have presented this paper because there is a scantiness of literature in regard to the cautery snare for operations in the nose and throat. I hope that when we next speak on the subject, I will have more in favor of it.

## ON BONY GROWTHS INVADING THE TONSIL.

Read in the Section on Laryngology and Otology, at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

BY ALEX. W. STIRLING, M.B., C.M. (EDIN.); D.P.H. (LOND.)

ATLANTA, GA.

The cases which I bring before you are interesting, I think, from the points of view of both the anatomist and the practical surgeon.

The first is that of a young lady of excellent personal medical history. Her only complaint had been slight chronic hypertrophic rhinitis, and for a few years some enlargement of the tonsils, especially the right, both of which secreted caseous matter and were at times a little painful. The inferior turbinated bones and the varicose veins of the lingual tonsil had been cauterized by one throat specialist, another had cauterized her right tonsil, and a third had cauterized cysts in both.

When tired she frequently complained of pain which she believed originated in the right tonsil and radiated thence to the mastoid and the right nasal bones, as well as to the right eye and shoulder. When squeezing out secretion she could feel a local tenderness in this tonsil.

On examination with the finger I was able to make out a hard immovable mass coming from behind the tonsil forward underneath it to the level of its anterior surface, but forming practically part of its substance. Its point is rounded, apparently about one-eighth of an inch in diameter, but becoming broader and somewhat flattened laterally as it extends outward, backward, and slightly upward. The finger pressed in front enters an angle formed by it and the inferior maxilla, and when pressed behind it enters another angle formed by its approximation to the right side of the vertebral column. The tenderness felt on pressure appears to be due to the nipping of the tonsillar mucous membrane between the finger and the hard body. Nothing of the kind can be discovered on the left side.

The second case consulted me on account of large polypi of both nostrils from which she had suffered for years. She is 64 years of age, has asthma and a week cardiac muscle, but otherwise is in good health. There is nothing of note in her family or personal medical history. On examining her throat I observed a slight protuberance just above and in front of her right tonsil. With the finger I found it to be nearly the same as that described in connection with Case 1, with the following points of difference. In the second case it exists on both sides, though it is not quite so prominent upon the left side; it is also higher, farther forward, perhaps a little thinner, and with a more apparent upward direction.

The growth is quite immovable, and there is no unnatural tenderness on examination. The patient has never had the slightest trouble with her tonsils. I have been able to examine the throat of one of her daughters, but could find nothing unusual there.

The third case is a brother of Case 2, aged 65. He likewise has been free from throat affections or any infirmity which might have a bearing on this subject. On both sides he has the same peculiarity, but differing from the previous cases in that the hard masses are altogether in the posterior part of the tonsils, are much longer, reaching a full finger breadth below the level of the lower tonsillar border, are perhaps rather more slender and, for nearly half an inch of the lower end on either side, cartilaginous to the touch and movable.

The question now arises, what are these substances? They are evidently not tonsillar calculi, because they have none of their characteristics except tenderness. In view of the fact that they have given rise to no symptoms whatever in two cases, and from their formation, position, and immobility, it seems to me certain that they are not the result of disease, but that they are rather congenital peculiarities, having however a distinct interest in cases of disease in their neighborhood.

In endeavoring to come to a decision relative to their origin, let us examine the bony structures from which they might arise, for they can be nothing else than bone. They all arise on the outer side of the throat, and it may be from the lower jaw, the vertebral column, or the base of the skull. If they came from the lower jaw to which they closely approximate, they would move along with it, but not one of them does so. They do not come from the bodies of the vertebræ, because the finger can exclude these. The pterygoid plates are too far forward; the spines on the posterior extremities of the wings of the sphenoids are rather less unlikely, but they too are somewhat too far forward and are distant. It is much more likely that the growths are simply prolongations of natural prominences than entirely new formations; by a process of exclusion we are limited to the transverse processes of the vertebræ and the styloid process.

The tonsil is situated on the level of the upper part of the body of the axis or of the disc between it and the atlas. The transverse process of the axis is small and does not move on rotation of the head. The bones under consideration do move along with the head on rotation, and come into much greater and visible prominence when the head is turned toward the side opposite to that under examination.

We are therefore reduced to the atlas which is as

regards rotation of the head a part of it, and the styloid process. To which of these the bones belong is a question of interest chiefly in view of the possibility of their becoming carious or involved in an operation; for disease affecting the styloid process might spread to the main body of the temporal bone, and the delicate structures in relation with it, and if the atlas were in any way injured at least a serious condition of things might arise.

Upon this atlas, kindly lent to me by Dr. Grandy, with this skull, the posterior limb of the transverse process which ought to, but does not, join with the anterior to complete a foramen, is nearly an inch in length, and were it longer would reach the region of the tonsil if its curve were continued, or were a little accentuated; and its direction would correspond fairly well with that of the growth especially of the first case.

The direction and size of these growths afford no satisfactory point for differentiation. Neither does the movement of rotation, and the only way to distinguish between them, of which I have been able to think, is that the skull proper moves when the head is nodded, which is not the case with the Atlas. These bones move with the head on nodding, and I therefore conclude that they are styloid processes. Other arguments in favor of this view are the presence of cartilaginous terminations in the case of the male patient, and the well-known variability in length of the styloid processes. I have been able to obtain little or no assistance from literature in making my diagnosis. Among the books on anatomy and diseases of the throat which I have been able to consult, I have found only one reference to such a condition as this. A few cases of exostosis of the bodies of the vertebræ, having no resemblance to these, have been recorded. Three widely-known specialists on throat diseases with whom I have been in correspondence, and one of the most experienced of European anatomists have all informed me that they have never seen such a condition as I described to them.

The one reference to any such which I have seen is in Schech's book on diseases of the mouth, throat and nose. He refers to a case "described from the anatomic point of view by W. Gruber," and another from a clinical aspect by Lücke, while Weinlechner is said to have broken away a piece of bone which caused inconvenience in swallowing. These are recorded as abnormally long styloid processes.

This condition of the tonsil is not to be looked upon as a mere anatomic curiosity, for in two at least of my three cases an attempt at tonsillotomy might have been met with considerable difficulty had a correct diagnosis not been previously made, and it might be of consequence in other operations in that region. As regards treatment, there is no necessity to interfere in the cases of the elderly people. The tonsils are troublesome in the first case, and it is a question whether removal of part by the guillotine, cautery or otherwise, or even the breaking up of it with a blunt hook might not result in so tightly stretching the mucous membrane over the bone as to produce pain or even ulceration and exposure of the osseous tissue. Personally, unless in case of urgent necessity, I should be averse to removal of the latter on account of possible secondary mischief in the bone, or of interference with the attachments of muscles and ligaments.

DISCUSSION.

Dr. W. E. Casselberry, Chicago, Ill.—I saw these very interesting cases. The first case to which he has reference, is a very distinct pointed prominence on the right side occupying the location of the anterior pillar, which covers it more than the tonsil, although when it is stretched forward the tonsil will cover it. The curvature inward and the position would satisfy me that it was a styloid process turned inward toward the throat. The other case had much the same condition but is not so pronounced. The committee agreed that the case was an abnormal styloid process. It is of some importance in connection with possible operations on the tonsils. In regard to operating, laryngologists should take palpation more into consideration. Upon palpation they would discover that there was something of a hard nature and would be warned against operating. I do not think anything serious would occur if an operation was attempted; I think the instrument in both cases would slide over the projecting point rather than go through it. I would not make a tonsillotomy in that case or cauterize it, because the somewhat enlarged tonsil affords a useful padding to the short-pointed projecting styloid process.

## PORTABLE COMPRESSED AIR APPARATUS AND NASAL SAW.

Presented to the Section on Laryngology and Otology, at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

Dr. E. Fletcher Ingals, Chicago, Ill., presented a portable compressed air apparatus, with the following remarks: This is a compressed air apparatus designed for treating patients where

Portable Air Compressor, One-quarter Size.

we are obliged to carry an apparatus with us, as for instance in going to theaters to treat actors; or for the use of patients who need a high air pressure for making applications to the

Adjustable Saw, One-half Size.

larynx or Eustachian tubes. It consists of a cylinder eight inches in length and three and a half inches in diameter, capable of withstanding eighty pounds pressure. The cylinder has a movable head that will slide in so that the spray tube, pump and all other parts of the apparatus may be placed inside the cylinder when not in use. To use it the head is drawn up against a rim with a rubber washer and quickly fastened by clamps that make it air-tight. The air tube is one and a half

feet in length, so that the patient can hold the cylinder in the lap while the application is being made. A bicycle pump is employed, which is of convenient size to go inside the cylinder when packed, but is of sufficient size to enable one to easily obtain forty pounds pressure. The cylinder filled with compressed air by this means holds sufficient to throw a strong spray the length of time necessary for treating five or six patients.

The price of this first apparatus, without a case was $15, but as more are made the manufacturers say they can be furnished in a leather case with space for a reflector, throat mirrors and extra solutions, if desired, for $15. The case complete with the extra space for other instruments will measure only eight and one-half inches in length, four inches in width and five inches in height, or without space for head mirror will measure eight and one-half inches in length, four inches in width and four inches in height.

Dr. Ingals also presented a nasal saw with an adjustable handle that could be set at any angle. The instrument was provided with two blades, one to cut forward the other backward. It had proved very satisfactory. It was made entirely of metal.

## HYSTERIC DEAFNESS.

Read by title in the Section on Laryngology and Oto'ogy, at the Forty-seventh Annual Meeting of the American Medical Association at Atlanta, Ga., May 5-8, 1896.

BY H. V. WÜRDEMANN, M.D.

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MILWAUKEE, WIS.

That protean affection, hysteria, may be considered a purely functional disease. There is, however, usually some concomitant affection or lesion which may be deemed to be the cause. This may excite a local hysteric attack in a patient predisposed by mental or moral influences. Some actual injury or shock to the part is in many cases the predisposing cause for the local manifestation. Affections of the sight are frequently seen; indeed, in most hysteric persons it is possible to find some defect of the visual field.

Hysteric deafness is very rare. In the *Medical News*, Feb. 14, 1891 I reported such a case. Since that time two more have come to my notice:

*Case 1.*—Hysteric deafness and blindness in a woman after injury to the head.

Aug. 29, 1892, a woman, age 42, was sent to me on account of monaural deafness. She gave a history of a railroad accident a few days before in which she had been struck on the left side of the head; had been prostrated and in bed after arrival in this city. She claimed to have had severe pain in the left ear the day before and discovered that this was totally deaf.

*Status Presens:* Patient very nervous and excited. There was a contusion with swelling over the left orbit and malar bone of same side, which patient thought was broken, but examination showed no evidence of fracture. The vision of this eye was slightly reduced for distance and she claimed that she was not able to read ordinary print. Objective examination of the eyes was negative; the refraction and fundus normal; pupillary reaction and pupils normal. Contraction of the visual field on the affected side. Examination of the ear showed a normal drumhead and no visible cause for the pain or deafness. She could only hear loud sounds on this side. That of the right was normal. Tuning fork placed on vertex was heard only on the right side and not at all on the left by aerial or bone conduction. There was no tinnitus or aural vertigo at this time. Two days later the left ear appeared totally deaf. She complained of great pain in the back and leg of this side and of hypresthesia. She asserted that the whole of this side was weaker than the other. Objective examination showed left hemihyperesthesia and a questionable hemiplegia. Treatment advised was absolute mental and bodily rest with bromid of kalium and valerian. Diagnosis at the time was hysteric deafness, the locality of the functional disturbance being probably influenced by the character and place of the contusions. A prognosis was given of probable recovery either after the effect of the primary shock had passed away or after the lapse of some weeks.

One month later I examined her again, finding that she could hear a loud voice but could not understand spoken words on the left side; hearing on right side normal as on first examination. Objective examination negative. Tuning fork only heard on the right when placed on the vertex. She was excitable and had an anxious countenance and complained of pain in the back of the head with creepy sensations and weakness on the left side of the body. Also had pain in the ear and roaring sounds which were immediately relieved by weak galvanic electricity. Patient had a fainting fit in the street car on returning home from my office. The vision was blurred for reading in both eyes in a few minutes. There was now no contraction of the visual fields and the vision was normal for distance. About three months later the railroad company having settled with a moderate sum for damages, the hearing gradually came back to the affected side, and examination one year later showed that it was normal.

*Case 2.*—Hysteric deafness and blindness in a child after pulling the ear.

Nov. 9, 1893, an anemic child, aged 11, had trouble at school several weeks before when the teacher pulled her right ear. She became totally deaf on that side and partially so in the left within a few hours; complained of her sight and was light shy. Was given near-sighted glasses (—1 D.) by a jeweler, with which she claimed she could see better, and without which she kept her eyes closed.

*Status Presens:* The child was apparently apathetic and stolid. The right concha was red and exquisitely tender to the touch caused, as I observed, by furtively pulling the ear when she thought she was not being watched. The membrana tympani were normal. She has slight hypertrophic rhinitis for which the mother had been douching the nose with a syringe and salt water. Patient could not understand what her mother said, although she had been shouted to for a couple of weeks, but she was apparently observant of our conversation. On taking the child aside I found that she understood me when I talked in an ordinary tone of voice. All tests for hearing were useless.

Her vision was R. and L. 6-18 with her glasses and without them she would not read any letters. I explained the case to the mother and commenced at once to make a decided mental impression upon the child, *i. e.*, to hypnotize her. I told the mother in the child's presence, in a manner to give her the impression that I did not wish the patient to hear what I said, "that I was about to do an operation that would cure her at once." The child seemed apathetic but responded to the usual hypnotic suggestions and on brisk Politzerization with chloroform vapor, could immediately hear ordinary conversation, her mother's voice as well as mine. Hearing tests showed that she could hear the acumeter, the watch, whisper, voice and tuning fork at a normal distance and in a normal manner; besides this she could read all the test letters to 6-VI without glasses. These were taken away from her, but a subsequent examination showed that the eyes were 1 D. hyperopic. The child would not allow of a second Politzerization without hypnotic influence, but the effect of the one given was sufficient to cure the case. Tonic treatment was instituted, and as long as the case was under observation (six months) no return of the hysteric symptoms recurred.

I can not ascribe either of these cases to malingering entirely, although in many cases of traumatic hysteria there is a tendency toward deception. It is probable that the disturbances of special sense in both cases were entirely beyond personal control and were only to be cured by outside suggestion. The first case would not submit to such treatment, but in the second it was thoroughly successful. I have seen other cases of hysteria relieved in quite as remarkable a manner.

805 Grand Avenue.

**Amblyopia Consequent to Chronic Endometritis.**—Monte Mor describes in *O Brazil Medico*, August 1, a case of almost total blindness accompanying chronic uterine disturbances. Dilatation and curettement with antiseptic injections, etc., cured the endometritis in fifteen days, and with it the amblyopia. He queries whether the visual trouble could have been of hysteric origin, but adds that the duration, over a year, argues against this supposition.

# THE ANATOMIC CHANGES IN TWO CASES OF RETINAL DETACHMENT.

Read in the Section on Ophthalmology, at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

BY ROBERT L. RANDOLPH, M.D.

BALTIMORE, MD.

I have selected these two cases as being fairly typical of the two principal conditions leading to retinal detachment: first, a spontaneous detachment due to fibrillary degeneration of the vitreous body, and the second case was one where a small round-cell sarcoma had lead to propulsion of the retina away from the choroid.

In case one the detached retina as it sprang from the papilla appeared like a funnel having a neck about one-fifth of an inch long and which at this distance from the papilla commenced to assume the funnel-like shape. The retina was detached below, all the way around to the ora serrata. Above at a point one-sixteenth of an inch posterior to the ciliary muscle it was lying in position. From this point it turned backward and then passed directly down to a point which lay in the pole of the lens, and from here took a course forward and then upward and finally lost itself in the ora serrata. That part of the funnel which had an upward direction was thrown into numerous and intricate folds and enclosed in its meshes a mass of vitreous body, while that part which passed below was composed of the entire thickness of the retina which appeared quite normal. The peculiarity of this portion was the absence of folds. The inner surface of the retina at the widest part of the funnel was covered with a thick mass of vitreous body and the angle which was formed by the ciliary body in front and by the retina behind, as it fell backward and downward from the ora serrata, was filled with coagulated material and fine fibrillæ, which latter passed forward and served to form numerous bridges across this angle. The ciliary processes were covered posteriorly with several layers of the vitreous fibrillæ. The zonula was not distinguishable as such, it no doubt being merged into the vitreous fibrillæ. That portion of the vitreous lying between the retina and choroid was empty. No doubt we had a fluid here during life. At some points anteriorly could be seen what are described by Nordenson as the choroidal tufts, which appeared like little bridges uniting the retina and choroid. There was nothing worthy of note about the choroid and the same could be said of the ciliary body, iris and lens. There was a great quantity of material in the interior chamber which was probably transudate, congulated by the hardening process.

*Microscopic Changes.*—The changes in the retina were very noticeable and particularly in the anterior part of the eye. The anterior portion of the detached retina was the seat of the most marked degenerative changes, the retina itself resembling closely a reticulated tissue in which there was hardly a trace of the several layers. Posteriorly it was easy to recognize the several layers but they gradually disappeared toward the ora serrata and the only evidence of a layer was a single row of granules which marked the course of the external granular layer. The layer of rods and cones was intact in several places but this condition was usually found in the posterior half of the eye. At those points where the retina was thrown into very intricate folds this layer was more apt to be absent, but even in this situation it was sometimes present. In those situations where the layer of rods and cones was absent its place was filled by a mass of albuminous drops, which were arranged in layers one on top of the other. On the inner surface of the retina one could see the meshes of the vitreous fibrillæ, which appeared to be exercising traction upon the surrounding retina. This layer of fibrillæ was tolerably rich in nuclei. In one place the retina had curved around so as to form a loop, on one side of this loop all the layers were to be seen with the exception of the ganglion cell layer. The layer of rods and cones could be plainly seen as well as the external limiting membrane. On the opposite side of this loop the only layers which were present were the external granular and the external molecular, the latter to a very limited extent. The inner layers in this situation had been pulled out of all shape by the vitreous fibrillæ. The external granular layer presented generally a very irregular border line appearing at points as papilla-like projections, due I think to the folding of the retina. The layer which occupied the usual position of the nerve fiber layer and which to a large extent was that layer, was the seat of numerous nuclei. The radiating fibers of Müller showed generally a wavy course. The line of demarcation between the ganglion cell layer and the nerve fiber layer was difficult to make out. This was no doubt to be attributed to the traction exerted upon the nerve fiber layer by the fibrillæ and also by the very irregular course followed by the radiating fibers. As a rule the ganglion cells had dropped out of the section and it was impossible to identify this layer. An examination of the neck of the detachment, or as I have called it, the neck of the funnel, showed no remains of the vitreous body.

This neck appeared to be a mass of connective tissue in which it was impossible to distinguish any of the retinal layers though it seemed to be made up largely of the granular. At the papilla there was no semblance of the retinal structure. There was too at this latter point a notable absence of blood vessels. Upon the neck of the detachment on all sides there were resting several layers of albuminous drops. The fibrillæ were for the most part devoid of nuclei. They often appeared as though they came directly out of the retina and made their way into the vitreous body or as though they were prolongations of the radiating fibers, so intimate was their connection with the latter.

*Choroid.*—On the inner surface there were several layers of albuminous transudate resting on the pigmentary layer of the retina, which layer had remained behind as it usually does in such cases. Increased nucleation was everywhere present throughout the choroid, and further than the points just mentioned; there was nothing noteworthy in this part of the eye. The vitreous body was entirely wanting in the posterior part of the eye. Just behind the lens it seemed to be transformed into granular debris devoid of fibrillæ, while in other portions it was composed apparently of the fibrillæ which have been described. The lens, iris and ciliary muscle were normal.

The chief points then about the pathologic anatomy of this case were: 1. The widespread atrophic degeneration of the retinal layers and especially of the layer of rods and cones. As a general thing the granular layers were the only ones which were preserved. 2. Swelling of Müller's fibers. 3. The presence of

albuminous drops in various localities, especially between the choroid and retina and along the neck of the detachment, and finally the transformation of the vitreous body into the fibrillæ.

The second case was that of a boy aged 7 years who came to the Johns Hopkins Hospital early this spring. His parents had taken him to an oculist several months previously and at that time his eye was not thought to be in a serious condition. He had been complaining for the last three weeks of severe pain in his right eye and his parents had noticed a whitish yellow reflex from this eye. This was very noticeable when he came to the hospital. The tension of the eye was decidedly elevated and the conjunctiva was injected. Vision in this eye was completely gone. I advised enucleation and the eye was removed the following day. The macroscopic condition was as follows: The tumor involved almost the entire nasal half of the retina, filling up that side of vitreous space both above and below. It extended backward and seemed to proceed from the nasal side of the optic nerve and, advancing into the vitreous, stopped at a point about a quarter of an inch posterior to the lens. Over the area occupied by the tumor there was no trace of the retina to be seen. On its free side the growth was quite nodular and one of the nodules projected across to the temporal side of the eye and almost reached the retina on that side. The retina in the temporal side of the eye was completely detached.

Microscopic changes: The tumor was scant in intercellular substance and was made up of small round cells. Blood vessels were quite numerous and they were usually filled with red blood corpuscles. Large areas of the growth failed to take on the hematoxolin stain but stained with eosin. These were evidently necrotic areas. Hemorrhages were frequently seen. Wherever the tumor was present the retina was indistinguishable, the tumor having grown into it. The tumor cells were found in the optic nerve as far back as a quarter of an inch from the papilla. The vitreous body had been crowded over to the temporal side of the eye and transformed into the characteristic fibrillæ, which were exerting traction upon the retina and had pulled it into intricate folds in the anterior portion of the eye and just behind the lens the traction was enough to pull the retina backward to such an extent that there was only a short, narrow bridge separating the latter from the growth. The layer of rods and cones was nowhere visible, and as in the first case, the ganglion cells had dropped out of the section. The internal and external granular layers were clearly definable from the equator around to the ora serrata. The retina posterior to the equator was very much thickened and broken down, failing to stain. At one point only, and for a very short distance, the external limiting membrane could be seen. The fibers of Müller were somewhat swollen and had a wavy course, which more or less disturbed the position of the retinal layers. The choroid nearly everywhere had been attacked by the growth; large and small heaps of sarcoma cells were present in this coat, and generally they were resting under the pigmentary layer of the retina, which latter was pushed up. This condition extended around as far as the ciliary region on the nasal side and on the temporal side a short distance from the papilla. There were no albuminous drops. The principal changes in this case were the conversion of the vitreous body into fibrillæ and the atrophic degeneration of the retina in the anterior part of the eye.

It would seem then that fibrillary degeneration of the vitreous body is to be found in both classes of cases. In the case of spontaneous detachment it was evident that the fibrillæ were largely concerned in pulling away the retina from its normal position and from the arrangement of the retinal folds shrinkage or contraction from within must have been going on. In this case there was a considerable exudate consisting of albuminous drops resting on the membrana limitans externa, which exudate no doubt played a part in separating the retina and choroid. These two conditions would explain the detachment in the first case and similar ones. In the second, the presence of the sarcoma was sufficient to lift the retina from its position, though even here it was clear that the retina was subject to a force from within which helped to pull it still further away from the choroid. I failed to discover a rent in the retina in either case.

In conclusion, then, the most striking anatomic change in these two cases was the fibrillary degeneration of the vitreous body, a condition which I think is found more or less in every case of retinal detachment, and which probably is the chief element in the pathogenesis of the disease.

## ETIOLOGIC FACTORS, OTHER THAN MYOPIA, IN THE PRODUCTION OF RETINAL DETACHMENT.

Read in the Section on Ophthalmology, at the Forty-seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga., May 5–8, 1896.

BY H. O. REIK, M.D.

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BALTIMORE, MD.

Of all cases of retinal detachment, between 40 and 50 per cent. occur as the result of high degrees of myopia with the severe choroido-retinal changes that attend this refractive condition. In most of these cases the separation occurs spontaneously, but even in those in which it is the direct or immediate result of traumatism the eye has been previously prepared for this accident by the weakening of its tissues. In a study of the other 50 or 60 per cent. we are compelled to attribute their origin to quite a variety of causes.

The first of these to consider, because of its frequency, is trauma. Whether the eye be myopic or hypermetropic, diseased or healthy, a wound and particularly one that penetrates the sclerotic and choroidal coats, may give rise to intraocular changes that result in disorganization and separation of the choroid and retina. A myopic eye, or one that is the subject of choroidal or retinal disease, is predisposed to detachment, and in such cases often a very slight blow will produce very serious consequences. Any severe blow, or injury about the head, may produce detachment, and Dr. Maher has reported a case which he believes, and with apparently good reason, to have been caused by the use of forceps at birth.

The next largest number of cases are the result of pathologic conditions of the choroid or retina produced by those diseases of the kidneys which may be grouped under the general title of albuminuria. It is not uncommon to find associated with Bright's disease a retinitis or choroido-retinitis with more or less

impairment of the vision, and in a small percentage of these cases detachment takes place. The anatomic seat of the eye lesion in this disease is probably the blood vessels, and as the supply vessels of the retina are end arteries any interference with their function is not compensated for as readily by collateral circulation as would be the case in other parts of the body. So, almost always an extensive edema of the retina exists, which, owing to the loose attachment of that tissue, gives rise to the production of delicate folds in the membrane and later these may amount to a positive detachment, with its tendency to spread over the greater part of the fundus. Occasionally, however, the detachment is brought about in a different way. The vessel walls are sclerosed and weakened by the general disease, and any influence which tends to suddenly increase the blood pressure causes a rupture of the vessel wall with consequent hemorrhage, and the blood clot, if it be sub-retinal, produces a mechanical separation of the retina from its bed. It would appear from the cases reported that detachment occurs most frequently in that class of kidney troubles in which we have to deal with what is known as the small granular kidney. As very many of the reports, however, do not state the pathologic nature of the kidney lesion, it is difficult to arrive at any definite conclusions in this direction. The above supposition, however, is what one would naturally be led to expect, as it is in association with the small atrophic kidney that retinitis albuminuria is most common. Just as the retinal inflammation may occur in any form of nephritis, either acute or chronic, so may detachment be the ultimate result.

The class of cases which probably offers us the most favorable prognosis is that occurring in the albuminuria of pregnancy, for here, if necessity arises, the cause of the disturbance may be removed, and with that element withdrawn there is a remakable tendency to spontaneous recovery. There seems to be no particular time in the course of pregnancy when we may anticipate retinal complications, as retinitis has been observed in every month, yet it is probably most liable to occur in the latter part of gestation, when the greatest tendency to general edema exists. Schoeler reports cases of two sisters, both of whom suffered during pregnancy from detachment of the retina without any signs of albumin or retinitis.

The following case of retinal detachment was related to me by Dr. Randolph. It is especially interesting as having occurred during labor. The woman was the mother of eight children and always had easy labors. Just before the birth of the ninth child her physician had made a thorough examination of her urine but had not discovered anything pathologic. The labor was an exceedingly painful one and lasted for twenty-four hours. At the height of one of her pains, and just after she had made a violent effort, she noticed that everything became blank before her right eye. Since then she has been practically blind in that eye. When seen by Dr. Randolph there was nearly complete detachment of the retina in the right eye, the left eye being quite normal. The case was seen a few days after the labor. I think that the violent efforts and straining which she was constantly making led to a rupture of one or more of the retinal vessels which discharged their contents beneath the retina, thus forcing the latter away from the choroid, producing a detachment. When we consider the frequency of subconjunctival ecchymoses following great efforts at stool or in children with the whooping cough, it is not strange that hemorrhage from the deeper vessels of the eye should have followed the violent efforts of a woman in labor.

A few cases of detachment due to diabetic retinitis have been reported, but such cases are extremely rare, as diabetes is but seldom complicated by retinal disturbances.

Galezowski found it, I think, in about 2 per cent. of his cases; syphilis is given as the cause, and the same writer reports four cases the apparent result of sympathetic ophthalmia.

Dr. Mathew Owens of Brisbane, reported in 1884 two rather peculiar cases of double retinal detachment occurring in previously healthy eyes, as the result of sunstroke. Both men were cattle rangers and the sunstroke was followed immediately by detachment. The men were young and there was no history of any diseased condition that might have predisposed them to detachment. In considering the cases Dr. Owens offers the following as a possible explanation: "It was shown by Boll that eyes which have been exposed to the influence of various colors are affected very differently as regards the pigment epithelium layer. If eyes have been exposed to red or yellow, or kept in darkness, the pigment layer is quite easily separated from the retina, but not so if exposed to white, green or blue. The retina and pigment are so closely united that they can not be separated. . . . The eyes of both patients had been exposed for some hours to the sun's glare, retinal hyperemia was present, sunstroke came on; the sinuses of the brain being engorged there was an impediment to the return of the blood to the brain from the congested fundus, effusion of serum took place, and the retina was quite ready to be detached because its pigment layer had been exposed to the yellow glare of the dried up ground." It is a rather unique explanation, and one which in my opinion is somewhat forced.

Erysipelas of the face and neuralgia of the fifth nerve in a small number of cases, have appeared to be the cause of retinal detachment.

Separation may be produced mechanically by hemorrhage or by sero-purulent exudates such as occur in purulent choroiditis or in phlegmon of the orbit. Tumors in the choroid or retina, or a cysticercus developing beneath the retina may also be causative factors. The tumors are usually glioma, or choroidal sarcoma.

In every case of detachment the cause should be determined, if possible, because of its important bearing on the treatment. Rydel has given statistics to show that 5 per cent. of all our blind have become so from retinal detachment. Despite the greatest care taken, however, in examining these cases, there still remain a large percentage in which no cause for the lesion can be ascertained. In these cases the patient usually gives the history of having been perfectly healthy, with an eye that was either emmetropic or hypermetropic, and no exposure to injury of any kind. The first symptom is a slight cloudiness of the vision, or a limitation of some portion of the visual field. It is not attended by pain and it is only the loss of vision, more or less complete, that causes the patient to consult an oculist. Some have thought that disturbances of the sexual nervous organization might be an explanation of a few cases, and in that connection quote Hutchinson as saying that "sexual abuse may produce

degeneration of the vitreous," but I can find no case recorded where there is any conclusive evidence of this having been the cause. Sudden suppression of the menses may result in hemorrhage, and that in detachment.

The pathology of this affection has not been satisfactorily explained. It was formerly held that the retina was pushed forward by a transudation from the choroid. This hypothesis now has few adherents.

A second theory, now generally known as the Leber-Nordenson, and which is the one most generally accepted, attributes the attachment to traction from the vitreous side. The active cause here is held to be a shrinking of the vitreous, which ruptures the retina and permits the fluid from the vitreous cavity, pressed out by the contracting tissues, to pass through the rent into the subretinal space.

This hypothesis assumes not only a shrinking of the vitreous, but an adhesion between the vitreous and retina and a rupture of the retina previous to its detachment.

That rupture of this membrane necessarily precedes its detachment I do not believe. I can not see the need of this supposition in regard to a tissue so loosely attached to its bed as is the retina, and, furthermore, if it does always occur we should be able to see it in a greater number of cases. In a very large percentage seen, even in early stages, it is impossible to find a rupture and even Leber, who considers it so important to his theory, found it positively, in relatively fresh cases, in only about 50 per cent.

It may be that in some cases, at least, the change in the vitreous humor is a chemic one, which leads to an interchange of fluids between that body and the blood vessels of the choroid, and that detachment is produced in accordance with the diffusion theory. This theory, so ably advanced by Raehlmann, has not received the consideration it would seem to merit.

Though the immediate cause of displacement is so obscure it is probably safe to say that the vitreous is always the seat of pathologic alteration, though such changes may not be, and often are not, apparent by ophthalmoscopic examination. One can hardly conceive, except in case of intra-ocular growth, or of subretinal hemorrhage, of detachment occurring when the vitreous is of normal consistency and exerting its usual pressure on the surrounding parts.

## TREATMENT OF DETACHMENT OF THE RETINA.

Read in the Section on Ophthalmology, at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

BY CASEY A. WOOD, M.D.

CHICAGO, ILL.

Without taking your time with a historical sketch of the various remedies employed in the treatment of detachment of the retina I may say that the earliest efforts of the ophthalmic surgeon were directed to puncturing the subretinal sac, as it was found that this usually brought the displaced membrane into its normal position. As, however, the detachment was found to occur a second or a third time or, indeed in many cases, as often as it was replaced, various expedients were resorted to with the hope of rendering the cure permanent.

Before speaking of these matters in detail let me remind you that replacement of the membrane does not necessarily mean a restoration of the lost visual function, although it is a *sine qua non* of that restoration. Nor do the visual acuity and the extent of the visual field form a proper measure of the success of a remedy for detached retina *as such*. A badly damaged retina (as in the long standing cases) perfectly replaced may give results much less satisfactory to the patient than an imperfect replacement of an otherwise healthy membrane—such as we commonly find in recent examples of this disease.

I pass over the treatment by rest in bed, with or without such adjuncts as bandages, the local use of eserin and atropin, the internal administration of salicylates, purgatives, diaphoretics, potassic iodid, pilocarpin injections, starvation, iridectomy, sclerotomy and puncture of the sclera, to take up certain other surgical proceedings that are now claiming attention as being more or less novel.

I had been attached for nearly a year to Professor Schöler's Klinic in Berlin when he first began to experiment with intra-vitreous injections of iodin in this disease. Consequently, I have had excellent opportunities of observing its effects. Although much was hoped and expected from the procedure and a number of cures have certainly resulted from its use, the evidence is on the whole against it as a dangerous and by no means certain remedy. That numerous eyes have been entirely lost from the employment of Schöler's method, I am obliged to confess, and I do not think that, even in its modified form, one would be justified in employing it. Most of you will also recollect Gelpke's experience. The patient, a healthy man, 66 years of age, with detached retina, received under strict precautions a vitreous injection of three drops of iodin mixture. *In two days he had a purulent choroiditis* and in six days he died of acute meningitis.

Other less active and more certain expedients may be employed to produce all the effects which Schöler claims for the iodin injections. We may dismiss, also, as needless and dangerous, the injection of irritating fluids—such as potassic permanganate, suggested, I think, by Darier—through a puncture in the sclera. To this category, too, belong De Wecker's device of a gold suture and Galezowski's catgut suture, all three intended to produce local inflammatory areas and so bind choroid and retina together.

Wolfe of Glasgow, made a long incision (6–10 mm.) through the sclera, the underlying conjunctiva being pulled away by hooks, and so obtained free and continued drainage of the subretinal fluid. In fifteen eyes he had improved vision (lasting five months to a year) from $\frac{1}{2}$ to 1-50; in five cases the results were *nil*, and in two instances the eyes were lost. Even when performed under strict aseptic precautions the danger of infection through these large wounds must be considerable.

Gillet de Grandmont first advised electrolysis of the subretinal fluid. Simi of Florence, among others, has successfully tried this method in a case of recent detachment, using a 5 milliampère current for sixty seconds, and two weeks subsequently the same current for seventy seconds. There were signs of reaction in both iris and vitreous and the exudation disappeared, but the detached portion remained opaque and was clearly outlined from the healthy retina by a pigmented line.

Terson of Toulouse, from a study of twelve cases in which he employed electrolysis of the post-retinal fluid, believes that the method of Gillet de Grandmont

with a single needle attached to the positive pole is superior to those of Abadie and Schöler, the latter of whom employed the bipolar plan—making two punctures in the globe.

*Posterior Ophthalmotomy.*—Galezowski[1] formerly relied on iodin injected into the post retinal pocket (1886) with aspiration of the contained fluid. If necessary he followed this with a catgut suture, passed like De Wecker's earlier gold stitch, through all the eye coats. This latter procedure usually succeeded in binding the retina to the choroid but as it was followed in two instances by severe intraocular inflammation he abandoned it in favor of the operation which he now recommends as free from danger and quite as successful. He calls it posterior ophthalmotomy. The instrument used is in the form of an arc of a circle, like a curved needle, so that a sufficiently large puncture and counterpuncture can be made and a sufficient number of retino-choroidal cicatricial points produced to keep the detached membrane in place when it has once returned. He has already followed this plan some seven times—in five cases with partial, in two with great success. In one instance of a man aged 50, with a double detachment, of long standing on the left side, but recent on the right, he obtained a complete cure in six weeks. The linear cicatrices could be made out with the mirror; the visual field and central acuity were very greatly increased.

Probably the most recent, original and important contribution to the rational treatment of retinal detachment has been made by Deutschmann of Hamburg, which first appeared in his *Beiträge zur Augenheilkunde*, although he has since (in May, 1895) given an abstract of the brochure in the *Deutsche med. Wochenschrift*. He prefixes the account of his methods by a reference to Erik Nordenson's work with Leber.

Apart from certain rare forms of the disease, detachment is due not so much to a primary deposit of water from the choroid behind the retina as to the dragging upon this coat by a diseased and shrinking vitreous. The detachment is merely one of the signs of the vitreous disease. Nordenson shows that without losing its transparency the vitreous develops a fibrillar quality, decreases in volume and in shrinking allows the vacant space to be filled with serous liquid. This change in the consistence of the vitreous body is not unfrequently accompanied by proliferation of the vitreous elements as well as by a chronic inflammation of the choroid. Portions of the thickened vitreous remaining firmly attached to the retina are, with it, liable to be dragged toward the center of the posterior chamber. Deutschmann's first proceeding, which he names *Netzhautglaskörperdurchschneidung*, is intended to sever all connections between the shrinking vitreous and the retina, to allow of a free communication between the posterior chamber and the serous collection behind the retina, to empty the latter space so that the freed retina may return to its normal position, and lastly, to produce adhesion between choroid and retina at certain points; these indications are met by the following operation: The previously atropinized eye is cocainized and a double edged knife, of the Graefe pattern, is introduced at the chosen spot, the conjunctiva being pushed to one side. It pierces all the ocular coats, sclera, choroid, and the detached retina. Thence the knife is passed obliquely through the vitreous mass until it touches the opposite wall of the bulb. It is now carefully moved to and fro toward either side making a vitreous discission and is finally removed, and a light occlusive and antiseptic bandage applied. Slight hemorrhage occurs at the point of entrance of the knife and inflammatory action is set up about the incision points in both choroid and retina. This latter process is relied upon to permanently fix the retina to the choroid and so resist any subsequent pulling of the vitreous.

The patient is now kept in bed for eight to fourteen days, until the ophthalmoscope shows that the case is cured. The atropia is continued for several weeks longer. When the retina does not lie perfectly flat on the day after the operation, a delay of a few days may be made in the hope of its complete return to the normal position. If this fails the same procedure is to be resorted to, as often as is required, until the desired effect is obtained. Deutschmann has operated ten times upon the same patient with good results at last. He thinks that repeated thrusts of the knife are safer than, and as effective in inducing a sufficient degree of adhesive inflammation between the retina and choroid as the application of the Paquelin or electro-cautery point to the sclera, or, piercing that also, to the choroid and displaced retina beneath.

He refers in his short article in the *Deutsch. med. Woch.*, to eleven patients treated by him, to date. Upon four the Paquelin cautery was employed and the sclera pierced. Of these four, two were partially relieved and two not benefited. Of the remaining seven, where the cautery was omitted, total replacement ef the retina was obtained in six instances, with decided improvement in vision. This satisfactory condition has persisted in one case for four years, three cases two years, one case one year and one five months. In the case, where least benefit accrued, only one operation was made, the patient declining further interference.

The author advises this operation in those more favorable cases, where the displacement is recent and not too widespread and where disease of the coats is not advanced.

In another class—in their nature more hopeless—he has employed quite a different and novel remedial process, which he styles "*Kaninchenglaskörpertransplantation.*" This was first tried on a patient 28 years of age, with bilateral detachment of the retina. The left eye had suffered a sudden and total separation of the retina from the choroid. The eye was soft and vision was reduced to perception of light in the upper part of the field. Both anterior and posterior retinal spaces were filled with a sero-sanguineous fluid. Deutschmann removed this bloody serum and with an ordinary hypodermic syringe injected into the empty vitreous cavity the freshly prepared, aseptic vitreous of a young rabbit, diluted with a $\frac{3}{4}$ per cent. solution of common salt. The addition of the sterilized salt solution was intended to allow of easy flow of the vitreous as well as to act as an irritant and bind the choroid to the retina. The result was marvelous. The operation was performed Feb. 4, 1894. On April 28, V = $\frac{1}{200}$; on July it was $\frac{1}{70}$ and Jäger No. 3. F. of V. for white was uncontracted and has so continued.

Deutschmann has, to May, 1895, performed this operation on six patients and seven eyes, and in four obtained results that hitherto would have been regarded as impossible. In all, central vision before the operation was reduced to perception of light or

[1] Galezowski: Mem. et Bull. de la Soc. frs. 1895, p. 170.

shadows and most of them were cases of total detachment.

In case 2, which was of many years standing, there was beginning secondary cataract; V= eccentric finger-counting at four feet. Result: Useful central vision, replacement of the detached retina and enlargement of the eccentric field to twice its previous size. Case 3, total detachment from injury. V = hand movements. Visual result not very encouraging. V = finger counting at 2 and 3 feet eccentrically.

In the other cases the result was uniformly favorable. The patients have been under observation for from a year in Case 1 to five months in Case 6 after the replacement of the retina. This operation may have to be repeated two or even three times and it must be remembered that an inflammatory reaction follows each injection.

Detachment of the retina does not occur often in this country, but I have on my records six cases that consented to be treated for a sufficient length of time to make my experience with them worth mentioning. The treatment for two scleral punctures, one iridectomy and the other three had prescribed for them continued rest in bed with pilocarpin injection. Only in one case, treated by puncture and pilocarpin, was there a permanent cure, the retina being replaced, the visual field expanded, and the central vision now equals finger counting at seven feet, although at one time it was reduced to perception of light. This continued for nearly a year, when I lost sight of the patient. My experience of this disease in my own practice, public and private, and in that of others lead me to think, with Bull of New York, that we have as yet discovered no better device than that resorted to with occasional success by the older ophthalmologists, viz.: rest in bed, bandages, atropin and the internal use of some absorbent. Instead of the long continued use of pilocarpin, especially when that drug is ill borne by the patient, we may substitute soda bicarbonate and potassic iodid, well diluted with water. In all recent cases where the eye is quiet and there is no vitreous strand to sever, conjunctival puncture of the sclera may do temporary good and vision may be improved. Division of fixed membranous bands in the vitreous may be done without causing much reaction and may prevent extension of the disease. He does not approve of Schöler's method.

In conclusion, this review of the treatment of detached retina would be incomplete without a reference to spontaneous cures. Many such cases are recorded; indeed one may safely say that of all the histories of cures, temporary and permanent, at least 10 per cent. were accomplished without treatment. So numerous and well authenticated are they that I think that a large percentage of the results obtained after iridectomy, after removal of the lens, from the use of atropin, bandaging, pilocarpin, etc., even some cases of cure following posterior operation, are really brought about by local and general rest—by putting patients in such a position that they can not by over exertion of any kind make a bad matter worse. The retina, having meantime broken loose from its connections with the shrinking vitreous, returns to its natural position—and the treatment, medical or surgical, receives the credit.

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This is the proper season to increase the membership in the ASSOCIATION. Let everyone secure *one!*

## REPORT OF A CASE OF RETINAL DETACHMENT AND EDEMA OCCURRING IN CHRONIC BRIGHT'S DISEASE.

Read in the Section on Ophthalmology, at the Forty-seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga., May 5-8, 1896.

BY LOUIS F. LOVE, M.D.

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PHILADELPHIA, PA.

When we take into consideration the blood conditions existing in albuminuria, it seems strange that the occurrence of retinal edemas and detachments are not more frequently found. The vitreous body is undoubtedly nourished from its surroundings, and Raehlman long ago demonstrated that by injecting strong salin solutions into the vitreous he was able to produce retinal detachment and that the fluid secreted was densely albuminous, so that it seems rational to say that any cause which produces profound changes in the circulation would interfere with the balance of osmosis between the vitreous body and the choroidal vessels. I believe that by a careful chemic and microscopic examination of the general blood conditions, especially the liquor sanguinis, we might be able to benefit, at least, some of our patients to whom we are at present useless. In detachments taking place in high myopias or resulting from inflammatory conditions, this line of investigation would be of no avail; but in those cases arising without apparent cause, such as we occasionally see in emmetropic eyes, that such a research might be of use. This case is reported for the reason that it is not only rare, but because of the unusual prolongation of life.

C. D., a short, stout woman, aged 54 years, applied for treatment Oct. 26, 1892, giving the following history: Had always enjoyed good health. Lately slight headaches and dyspnea upon exertion. She is the mother of five children, three living, no miscarriages, menopause at 46. Four years ago her vision in her right eye failed suddenly. About two weeks ago she noticed a dimness in the left eye. The present eye conditions were as follows: O. D. V. = counting the fingers at ten inches. O. S. V. = $\frac{20}{70}$ + S. 2D. = $\frac{20}{30}$ + S. 4D. type 1D. 12c to 25c. The eyes are rather deeply set, ocular and tarsal conjunctiva pale, the arcus senilis well marked above, the color of the irides brown, right pupil 3 mm. and very sluggish to light; left pupil about 2½ mm., active to light. Anterior chambers shallow, strong reflexes from both lenses. Right eye Tn — left Tn.

Ophthalmoscopic examination O. D: A few very fine floating vitreous opacities; the nerve decidedly atrophic; the vessels diminished in size and a retinal edema extending well out when an extensive retinal detachment was plainly seen superiorly and inferiorly, giving the characteristic delicate gray undulating tremulous protruding membrane. The vessels could be traced from the papilla out into the detachment, and in places showing sharp bends and partially hidden from view by the folds of the separate surface. The disc is seen best with + 3D., the detachment with about + 7D. Left eye lens seemingly hazy, disc very red gray, veins slightly enlarged, arteries normal in caliber, carrying poor blood, a large area of hemorrhagic extravasation in the macula region and a few white plaques found just above the disc. H. = 4d.

Examination of the urine was as follows: Straw color, acid, specific gravity 1018; albumin in moderate

amount, no sugar; microscopic examination hyalin casts, pus cells and few blood corpuscles.

The patient was under the care of Dr. J. C. Wilson, who saw her on four or five occasions, between Nov. 1, 1892, and March of the following year. His report to me was as follows: There was cardiac hypertrophy, accentuation of the aortic second sound and slight pre-tibial edema. She improved in respect to the headaches and restlessness while under treatment by strychnin and nitroglycerin, together with a carefully regulated dietary.

The woman was not seen again until Nov. 6, 1895, three years after the first examination. O. D. V. = light perception only. O. S. V. = $\frac{2}{20}$ + S. 2D. V. = $\frac{20}{30}$. Ophthalmoscopic examination shows vessels thread-like in the right eye, apparently similar conditions of retina as existed when first seen. The left eye, the nerve quite gray, vessels about normal in size, in the macula region a brownish black area, and above the disc there are characteristic changes of an old retinitis Brightii. The patient states that her general condition is about the same, enjoying fairly good health; she has taken no treatment since March, 1893, but adheres somewhat to the regulated dietary as ordered by Dr. Wilson.

1762 Frankford Avenue.

DISCUSSION ON PAPERS OF DRS. RANDOLPH, REIK, WOOD, AND LOVE.

Dr. J. A. White, Richmond—In considering the etiologic factors of detachment we are to some extent groping in the dark. Apart from myopia, tumors, subretinal hemorrhages and effusions, I do not think we have any very sure foundations for explaining the many cases we meet with where there is no apparent cause whatever. It is important to know the cause in order to decide upon the method of treatment, but in many cases this can not be established. When we come to consider the treatment we are still as badly off as we were many years ago. The old treatment of rest, diaphoretics, pilocarpin, etc., give us as good results to-day as any of the operative procedures. It is only in the recent cases of detachment that we have had any satisfactory results from any of the methods. I have tried rest, iridectomy, sclerotomy, paracentesis and sclero-puncture. I do not advise operative measures except in recent cases where the macula is involved, and even then I do not if there exists a condition likely to lead to hemorrhage. Electrolysis may be a good thing; certainly much has been claimed for it. The galvano-cautery is too dangerous, and should be placed in the same category as the injections of iodin. Deutschmann's method has been mentioned, but neither he nor anyone else has had sufficient experience with it to warrant very favorable reports. One method that has not been mentioned here is that of Strau. He frees the conjunctiva from the sclera over the site of the detachment, makes three little slits in the sclera, and then unites the conjunctiva over this with sutures and allows it to heal. He then makes injections in this region of a 1-5000 bichlorid solution, and has claimed very good results. It is simply an experiment, like all the others, and may be discarded. I have not tried the injections of rabbit's vitreous according to Deutschman. I have watched a few cases in private practice from their start. One was in a physician and associated with myopia. He has a low grade of myopia and wears a —2.50 D for distance, and with it has had for fifteen years almost perfect vision. Recently he said that he had a little spot in his eye; I paid no attention to it, thinking it simply a musca volitans. Some time later he complained of an increase of this spot, but I could not find any opacity with the ophthalmoscope. Later a slight spot became visible, looking like a floating string, and I then told him that his vitreous was undergoing liquefaction, though he never had any alteration of the refraction or any changes in the choroid that I could determine. Soon I noticed a secondary detachment, and although we gave treatment by rest, pilocarpin, etc., at once, in sixty days the detachment was absolutely total. He from the first refused an operation, because he was well acquainted with the subject, and knew the slight chances of success.

Dr. Lyman Ware, Chicago—I did not for a moment question the correctness of the report of Dr. Terson's cases, but I was not convinced that electrolysis was the cause of the result. Is the using of a positive pole a rational treatment? One of the first things settled in regard to the use of electricity was that the positive pole produced coagulation and the negative pole diffusion. Would not absorption be best brought about by the use of the negative pole? The fact that we have such a variety of treatments offered shows that none are very satisfactory.

Dr. A. R. Baker, Cleveland—I wish it were possible to make a more scientific classification of these cases. In the case of hemorrhage, tumor or trauma the detachment is simply an incident, and in those cases produced by Bright's disease, if the cause could be removed the case would recover. Formerly I made a sclero puncture, but lately I have omitted that. Besides rest I give them diaphoretics, and in some cases we have found considerable benefit. One case where there was almost complete detachment in one eye existing for a number of years was followed by detachment in the other eye. I kept him under treatment for six months, and discharged him with fairly good vision. About three years later I found him back in the hospital, blind and without any prospects of recovery. Treatment is very unsatisfactory.

Dr. G. E. De Schweinitz, Philadelphia—I would deprecate the report of cases of retinal detachment submitted to operative interference, before sufficient time has elapsed to test the sufficiency of their cure. I would suggest that Deutschmann's result in human beings with injections of sterilized vitreous be repeated in animals.

Dr. D. S. Reynolds, Louisville—I am unprepared to accept the details of the pathologic changes described by Dr. Randolph. It is by no means clear that the drawings furnished are sufficiently accurate to support the accompanying descriptive language. The normal retina can not be shown to contain pigmented layers, yet Dr. Randolph's report contains a reference to that impossible condition. In my own experience results have been in some cases very encouraging at first, but in a few months fatal relapses have occurred. In persons under fifty years of age, in good robust general health, medicinal treatment often yields brilliant results, but in nearly all cases subsequent return of the detachment of wider areas surely comes on in due course of time. I have seen it most always in myopes, but never in any but progressive cases. My attempts at operative treatment have yielded results in no wise more encouraging than that by the salicylates, pilocarpin and the iodids, with rest in bed. Much remains yet to be done before we may claim any permanent recoveries from any treatment.

Dr. R. L. Randolph—While nothing positive has been added to the therapeutics of this subject, I think we have gone over the whole field thoroughly, and it is always a help to know the present status of any subject.

Dr. A. R. Baker, Cleveland—The question has often been suggested to my mind whether we have detachment in this class of cases. I have seen but few except in high degrees of myopia, and become so accustomed to think of it in this way that I have almost quit looking for any other cause.

Dr. F. W. Higgins, Cortland, N.Y.—In looking up the subject of edema of the retina in Bright's disease, I noticed one cure reported by Brecht (Archives f. Oph., Vol. xviii, 2, p. 102) of marked detachment of the retina in nephritis. He considers it very rare and due to some predisposition.

## THE USE OF CAUSTICS FOR EPITHELIOMA OF THE LIDS.

Read in the Section on Ophthalmology at the Forty-seventh Annual Meeting of the American Medical Association held at Atlanta, Ga., May 5-8, 1896.

BY FRANK TRESTER SMITH, A.M., M.D.

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CHATTANOOGA, TENN.

This subject was suggested by the following case which came under my observation.

Frank S., age 64, of Chattanooga, at the age of 43 had had the right eye destroyed by an explosion. The ball was shrunken and the lids adherent, so that this eye was entirely useless.

The left upper lid presented an ulcer about one-third inch in diameter covered with a dry scab; on the inner and outer sides there appeared to be a blister. The trouble began twelve years ago from a small scab which was picked off from time to time and the ulcerated surface had gradually grown larger. A few days before, some empiric had made an application which had caused the ulcer to double in size, after which the borders had become blistered. A soothing application was prescribed with the idea that the blisters would disappear, but the bases became hard and the contents gelatinous. The case did not improve after several weeks' treatment. The diagnosis of epithelioma was made, and an operation, consisting of the total removal of the inner half of the lid and supplying its place by a plastic operation, advised. The patient was myopic and presbyopic. Left vision 20-200 with 2 dioptry concave lens 20-70. While preparing for the operation the patient came under the care of an empiric who by means of some caustic, apparently destroyed the pathologic growth, and it was replaced with a smooth cicatricial tissue, leaving the lid intact and much more useful and ornamental than any plastic surgery could have devised.

The case suggests that in some cases of epithelioma of the lids, especially where we can not operate, that caustics should be used. In this case the pathologic tissue extended so as to require the removal of the entire thickness of the lid by any cutting operation, and any surgeon would certainly have removed at least half the lid and even then there would probably have been a reappearance of the tumor. Nearly all this was removed and the lid left in good shape, with the loss of a small amount of tissue, by the use of caustic in unskilled hands. It can but suggest that if the caustic had been carefully and thoroughly applied the cancer cells would have been thoroughly destroyed.

Dr. A. R. Robinson, of New York, called attention to the advantages of the use of caustics in the treatment of cutaneous epitheliomata in an instructive paper read before the Tri-State Medical Society of Alabama, Georgia and Tennessee in 1895. For use about the eye he recommended a solution of chlorid of zinc in a 20 per cent. solution of cocain.

The objection to the use of caustics, in this location, is that some of it may come in contact with the eyeball and cause ulceration. For this reason these growths are removed by cutting.

The advantages of the caustic over the knife are that there is usually less destruction of tissue, and with the destruction of the same amount, the result is surer, because the necrosed tissue is surrounded with an inflammatory zone and the products of the inflammation tend to destroy the pathologic cells for a distance beyond the part extirpated. This is more likely to be the case if the wound is allowed to suppurate, as it is generally conceded that the toxin of germs which produce suppuration are destructive to the cells of epitheliomata.

Some of the caustics have an elective action on the cancer cells. This is notably the case with arsenious acid, which should be used weaker than in Marsden's paste; three parts of acid to two of gum acacia. It is said this will not attack normal tissue for twenty hours. It is believed that by having the case under constant observation during the application, that caustics can be used safely on the lids, in many cases, to the advantage of the patient. I am aware that this position is opposed to that of most oculists but I have been told that some of the members of this Section have used caustics instead of the knife. However, I have been unable to find any literature on the subject.

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## MEDICAL PARIS.

NOTES FROM MY SKETCH-BOOK.

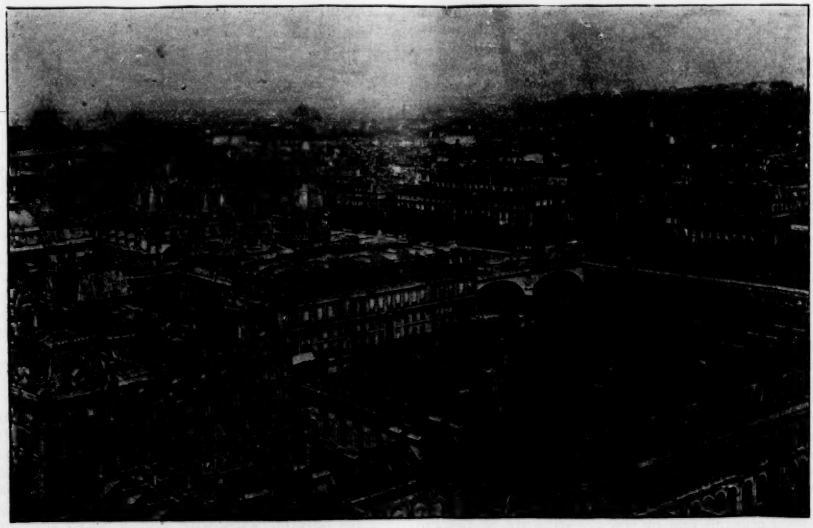
BY L. HARRISON METTLER, A.M., M.D.

CHICAGO, ILL.

In his powerful romance, "Les Mystères de Paris," Eugene Sue, who, by the way, was a physician and the son of a physician, paints a vivid picture of Parisian low life, locating most of his scenes in the crowded tenements and narrow alleys which once occupied the ground now covered by the immense buildings of the Hotel Dieu. When these buildings were constructed, only a few years ago, the remains of the historic Hotel Dieu, as well as many another ancient landmark, were swept out of existence. The Ile de la Cité, with the noble old cathedral of Notre Dame, the gruesome Morgue, so strangely fascinating to Dickens, the Hotel Dieu, so often pictured in history, poetry and romance, the Palais de Justice, the oldest monument in the city, and the matchless Sainte Chapelle, the gem of medieval architecture, constitutes only a small section of modern Paris, but it is the richest in historic lore and romantic anecdote. In one of the ancient streets, now vanished on account of the encroachments of the Hotel Dieu, dwelt the shrewd physician, Theophraste Renaudot, who, in 1630, printed the first Parisian newspaper, *La Gazette de France*. The wily Theophraste had observed something of the power of human curiosity and had cunningly undertaken to gather news from all quarters for the amusement of his patients. Of course his clientage rapidly increased and in a short time he was more in fashion than any of his practicing brethren. But all Paris could not be expected to be on the doctor's sick list at the same time, and were even such a pleasant thing possible his suite of apartments would not be able to accommodate such a glorious rush of practice. Accordingly the doctor decided to publish weekly some fly-sheets, containing the latest news from other countries. For this he needed a license and obtained it *cum privilegio* in 1632. The success of the venture surpassed the most golden dreams of even the medical imagination. Similar fly-sheets had already been issued in Venice, for which a small coin, *una gazzetta*, was asked, whence comes the name of our modern gazettes.

One day as I was coming out of the Hotel Dieu, a student, with whom I happened to get into conversa-

tion and to whom I had just mentioned several special clinics which I had learned were to be given, asked me where I obtained my information in regard to all these things. Of course I told him and then wondered if old King Clovis did not turn over in his grave to think that a Chicagoan must needs inform a descendant of the proud Franks in regard to his cherished Maison Dieu. The Hotel Dieu Hospital, or God's Hostelry, known in early history as the Maison Dieu, is said to be the most ancient hospital in Europe. The actual date of its foundation appears to be in doubt, though there are reasons for thinking that it had its origin under Clovis, King of the Franks, who flourished during the latter half of the fifth century. Saint Landry, who was Bishop of Paris about the middle of the seventh century, is the reputed founder. It is probably this hospital that is mentioned under the name of St. Christophe in a charter of 829. The Maison Dieu was not the direct offshoot of a monastery, as many other hospitals were. In accordance with the decree of Charlemagne, promulgated in 816, that at each See one of the canons should govern the hospital, and that the latter should always be near the cathedral, the Maison Dieu was erected within the shadow of the Notre Dame cathedral and was, until quite recent times, under the control of its chapter. At first it was more than a mere harborage for the sick. It was a charitable organization, embracing every form of aid to the poor and outcast. The first building to bear the name of Hotel Dieu, on the south side of the Place du Parvis Notre Dame, was commenced by Philippe Auguste, who named its first ward the Salle St. Denis. Queen Blanche of Castille added the Salle St. Thomas. It was then almost entirely rebuilt by St. Louis, who added especially the Salle Jaune and two associated chapels on the river bank. For nearly a hundred years after this it was wofully neglected, but when Louis XI. ascended the throne its prosperity revived. This king did much to favor it, and built the exquisitely beautiful gothic portals of the two chapels near the Petit Pont, which, together with the elegant renaissance gable belonging to the Salle du Légat, were the particular artistic features of the building until its destruction by fire in December, 1772, when many of the sick inmates perished and the rest were hastily received by the archbishop in Notre Dame. Henry IV. added two wings and greatly increased the revenue of the hospital. Were it not for the frightful loss of life and the burning of the charming chapels, the destruction of the old hospital was a blessing rather than otherwise. It was small, badly arranged, and anything but architecturally beautiful. Victor Hugo describes its front as "furrowed and rugged" and says its roof from the tower of the cathedral looked as though it were "covered with pimples and warts."



PARIS, LOOKING NORTHWEST FROM THE TOWERS OF NOTRE DAME CATHEDRAL. HOTEL DIEU IN THE FOREGROUND.

The next building that was erected to take the place of the old Hotel Dieu was devoid of all special features in the way of art and architecture. What little effect it did produce upon the artistic eye was completely lost by its juxtaposition to the great cathedral. It consisted of several irregular masses of buildings, and its portal, erected in 1801 after designs made by Clavereau, was severely plain and Doric in style. Beneath its peristyle stood the statue of the philanthropist Montyon, who was buried (1838) here, according to his desire, in the midst of the poor and sick. It was in this building also that the famous poet Gilbert died in 1780. In the reign of Louis XVI. the over-crowded condition of the hospital was a disgrace to the city of Paris and to the science of medicine. The monarch attempted some relief by erecting

four auxiliary establishments in the suburbs, namely, the St. Louis Hospital, the St. Anne Hospital, the Hospital for Incurables and the Hospital for Convalescents. A horrible picture of the wards at this time was given by Tenon, the president of a committee of investigation appointed by the Academy of Sciences. Convalescents were seen by the local commissioners in the same room with the sick, the dying and the dead. The insane were confined in neighboring rooms and apartments and kept the other wards in a continual state of excitement with their ravings. Operations were performed in the same room or ward in which there were beds containing other patients. In the days before the use of anesthetics we can well imagine that the cries and contortions of those undergoing operations would have anything but a favorable effect upon the other patients. During the French Revolution the name of the hospital was changed to L'Humanité. Finally the whole conglomeration of inadequate and unsightly buildings was demolished, an increased area was secured and the present vast, homogeneous and elegant edifice was inaugurated in August, 1877, under the direction of the architect Diet. It is an immense oblong stone building surrounding a courtyard of ample dimensions. The arrangement of the wings, gridiron-like, is the happiest imaginable for the introduction of air and sunlight into the interiors. Overlooking the courtyard is a peristyle or open porch all round the building where convalescents may sit in the open air. The work of the hospital comprises a service of about 810 beds. Of these 430 are for men and 380 for women. Medical cases take up 555 beds while 255 are given over to surgical cases. The history of the government of the hospital is interesting. Until 1505 it was under the management of the chapter of Notre Dame. After that year it was looked after by a committee of lay governors, eight in number, selected from the citizens of Paris. The selection was made by the mayor and aldermen and the appointments confirmed by the parliament. In 1654 the number of directors was raised to twelve. In 1690 Louis XIV. made some alterations in the government and formed the Grand Committee, including in that committee the archbishop of Paris, the former presidents of parliament, of the taxation court, of the court of alms, the commissioner of police and the mayor. To-day it is under the control of the Assistance Publique, one of the departments of the Prefecture of the Seine, as I explained in my last sketch. The oldest paper in its rich collection of archives is dated 1157, and from 1531 to the present there is a complete unbroken history of its work. Such is the story in brief of God's Hostelry, Paris, the oldest hospital in Europe, and one of the greatest in the world. Within its walls medicine has had one of its firmest strongholds and from its wards have issued many discoveries in science. Did I say the poet Gilbert died here? Many another poet has died here too; yea, and statesman and artist and soldier and king, whose names have never been emblazoned on the escutcheon of fame. Sickness is a great leveler of the human race; births and deaths emphasize the equality of man. A hospital is a place for thought, a great hospital awakens reflections that only eternity can answer.

As a frequent visitor to the Hotel Dieu I was intensely interested in some of the differences between French and American hospital methods. One day I accompanied a group of students, who were being instructed by the surgeon Kermisson, a spare, active, wiry sort of a man, who always wore a skull cap, through the wards. The operator hastened from one bed to another, examining this patient, performing a slight operation upon that one, prescribing for another, while the class arranged themselves as best they could about the foot of the bed, to see and hear what was being done. This walking through the wards has clearly its advantages for the student but disadvantages for the patient. The latter is excited and made nervous and it seemed to me was unnecessarily exposed to the contamination and germs of disease brought in by the students from the street. When an operation was to be performed a screen was placed by the attendants around a table at one end of the ward and the patient carried from the bed to the table. The patient, especially if it were a child, would scream and kick and thus disturb the entire ward. The morning visits of the staff were therefore always a time of excitement and turmoil, and in many respects the manner of them seemed to me to be unfortunate and primitive in the light of the scientific knowledge of the present day. Among the group of students, men and women, about twelve or fifteen in all, elbowed one another for a closer view or rattled their tongues in chatter like flying shuttlecocks. Modesty appeared to be an unknown quantity in such a group; science and knowledge alone were the guiding spirits. The exposure of the patients was at first something quite shocking to an American's sense of delicacy.

Upon another occasion at the end of a long ward I found a tall Japanese screen, behind which stood an operating table with a woman on it undergoing electric treatment for a fibroid tumor. Apostoli, to whom I had just been presented, was managing the operation himself, while the students pushed and crowded against each other, jammed their way in and out or stood tip-toe, craning their necks unmercifully to get a glimpse of what was in progress. My sympathy went out for the poor woman, for she was of enormous dimensions, and that with a goodly sized tumor thrown into the bargain must have made the journey of life for her a matter of no mean affair. And then to think after carrying all that flesh and blood along the rugged *via vitæ*, to fetch up at last upon an operating table at the end of a long and crowded hospital ward, with half a dozen men performing a private examination upon her and a dozen or more idle, curious French students (plus one American) looking on! Strange, indeed, are the destinies of some folks! For the happiness of her fleshly mortality I hope the tumor was reduced, but I have my doubts about it, never having yet seen so fortunate a termination in the electric treatment of fibromata. Apostoli, whom I afterward had the pleasure of meeting at a banquet and reunion of *Des Trente*, a non-professional society of congenial ladies and gentlemen, given by way of novelty upon the first stage of the Eiffel Tower, I found to be most enthusiastic, yet sufficiently conservative in regard to the possibilities of electricity. His ideas have been so extensively published that it is unnecessary for me to dwell upon them here.

Of the staff of the Hotel Dieu, the acquaintance of none afforded me more pleasure than that of the late Professor Germain-Sée and of the distinguished surgeon Tillaux. The first time I met the former, he was

seated at a small table surrounded by several students in one of the medical wards. He bore his years remarkably well and his kindly old face lighted up with a pleasant smile as he chatted about America and some of the good that was being accomplished by us. He was not a large man nor imposing in manner. His countenance was round and friendly, his head was bald and he wore close-cut side whiskers, leaving only the front and under part of the chin clean shaven. In accordance with the law of the hospital, Germain-Sée should have been retired many years, as he was past the age at which the government allows a man to hold a hospital position. So great, however, had been his services to medicine and so distinguished was his name, that an exception was made in his case and an extension of his time gladly granted. His didactic lectures were always well attended. In a small and poorly lighted room his class usually assembled, while he himself with one or two assistants would be seated behind a long, green baize-covered table. He always remained seated while lecturing, making use occasionally of brief notes. His style was ideal for a scientific discourse. It was decisive and clear-cut, and as the speaker leaned over the table toward his hearers and emphatically voiced his dogmatic opinions one could not help admiring the preciseness, the optimism and the fertility of resources evidently acquired by long years of valuable experience in contest with disease. At times sparks of gentle humor would flash out of the discourse. It was always a quiet, incisive sort of wit, rather than a broad rollicking humor. Instead of a peal of laughter, it would merely produce a lively titter among the students, which would subside as quickly as it had arisen.

In physique, disposition and manner, Tillaux is the very type of the old-time surgeon; large, portly, full of inspiring confidence, moving about with a heavy tread and always speaking in an assertive, commanding tone of voice. To "assist" (a word used by the ever-polite Frenchman for one who is merely a visitor) him in one of his morning visits to the wards of the hospital is good surgically and psychologically. I was more than once inclined to wish that some of our younger surgeons had somewhat of the old-time dignity and courtliness about them. It would not add one whit, of course, to their skill, but it certainly would lend a grace and pleasing manner to their noble art, and it would have somewhat of a beneficial effect upon the unstable, nervous condition of many of their patients. Appearances count for something sometimes. I would that I had space to relate more of what I saw at the famous Hotel Dieu, but I would then have to omit another great hospital, probably better known than the Hotel Dieu and that without doubt through the association of the world-renowned Charcot.

From his residence, a typical elegant French apartment on the Boulevard St. Germain, not far from the artistic Pont de Solferino, the late Professor Charcot was wont to drive in his handsome brougham and pair every morning between 9 and 10 o'clock to the Salpêtrière Hospital at the other end of the city. A pleasant way to reach the hospital, however, is to take one of the flying little propellors on the river and after a delightful sail past many ancient and modern landmarks, to land at the Pont d'Austerlitz. A few steps along the broad but not particularly elegant Boulevard de l'Hôpital will bring one in front of an old-fashioned building, over the doorway of which will be seen engraved the words, *Hospice de la Vieillesse. Femmes.* Not far away rises the vast Halle aux Vins, which would presumably charm into ecstasies our bibulous friends; near by are the famous Jardin des Plantes, especially interesting to medical men as having been founded by Richelieu at the suggestion and solicitation of Labrosse, physician to Louis XIII. How much more influential medical men have been and are to-day in the history and government of France than they are in America. Why?

The Salpêtrière, named after a large saltpetre manufactory that was once in the vicinity, is said to be the largest almshouse in the world. It consists of an irregular assemblage of buildings with surrounding gardens, courts and promenades, all covering an area of about seventy-four acres. A brick wall surrounds the whole. Altogether the various buildings comprise forty-five large blocks. These are lighted by more than five thousand five hundred windows. Louis XIII began building the institution as an arsenal, afterward using it to relieve Paris of the numerous beggars produced by his wars. It was also used as a kind of general hospital. Additional constructions were added to it at various times. Louis XIV conferred upon it a large grant of lands and under this monarch its main building was erected after the designs of Liberal Bruant, the architect of the "Invalides." The most interesting architectural feature is the church built in the form of a Greek cross in the center of the grounds, and containing a fine altar, dating from 1670, beneath the center of the large octagonal dome. Many of the main buildings are arranged in parallel lines with an archway beneath connecting the intervening courtyards. The first of these buildings that one comes to after entering the gateway is the *Bâtiment Mazarin* built by the cardinal of that name for the aged and infirm women, who during their youth were servants in the establishment. Their lodging was given to them gratuitously; they were allowed the same food they had been accustomed to as servants and which was better than that given to the paupers; but they were paid no wages. In one of the yards with graveled walks and shady trees stood about a dozen brick buildings with overhanging roofs after the style of the Swiss chalets. Each interior was a single apartment about fourteen feet square and was for the accommodation of a special *class* of insane. The Salpêtrière is devoted to the care of the aged infirm, the insane, the epileptics, the idiots and the defective children. The hospital proper was a detached building of three stories and an attic, and contained twenty-four "*salles des malades.*" The "*salle aux bains*" is arranged in the "*rotunde*" with sixteen baths, each being surrounded with a white curtain and abundantly heated. In 1850 a central workshop was organized for manufacturing and repairing, for destroying old linen and bedclothes and for preparing lint for dressings, etc. There are shops for carpenters, joiners and carriage makers. The wash-house built on an immense scale bleaches every year, it is said, 1,500,000 pieces of linen, not only for the hospital but also for the Hotel Dieu, the Charity and the Hôpital des Cliniques. All except the insane department is open daily for visitors. The inmates have special days upon which they may receive their friends. On Sundays and fête days they may wear whatever clothing their fancy dictates but on other days the costume of the hospital, blue in summer and gray in winter, must be donned. There

are entertainments, including music and dancing, arranged for the inmates. The cooking for the whole establishment is done in one immense kitchen. The insane of course eat in their own special dining room. The individual allowance consists of 10 decagrams of bread, 13 decagrams of meat, 45 centilitres of bouillon, a dish of vegetables, some dessert and 12 centilitres of wine. As for the insane department, the asylum is of course a very old one but its management is quite in accord with the most modern requirements. It will always be interesting on account of its association with the great reformer Pinel, a large and magnificent painting of whom striking off the chains of the grateful patients, hangs over the platform in the room in which Charcot held his public clinics.

In 1662 the institution contained nearly 10,000 people. During the Revolution the number of indigent females, the males being always sent to the companion institution the Bicêtre hospice out on the road toward Fontainebleau, was 7,000 or 8,000. Since that time the population has been steadily reduced and the management correspondingly improved. Statistics in regard to the number of inmates are obviously subject to much variation. In 1889 the total population consisted of about 6,311 souls; of these 590 were of unsound mind.

In passing it may be of interest to state that the Hospice de Bicêtre, named from John, Bishop of Winchester, Bichestre, Bicestre or Bicêtre, was founded by Richelieu in 1632 for retired soldiers. It is a most ungainly looking structure and resembles more an impregnable fortress than a hospital. It is for men what the Salpêtrière is for women, and with its rich clinic material Dejerine and others are doing some splendid work. The guillotine was first started in its deadly career here and within its walls Victor Hugo has placed the scene of his powerful story *Le Dernier Jour d' un Condamné*.

Much to my regret so much space has been already occupied that I can do but little more than mention the clinics of Professor Charcot. Having been the fortunate recipient of an autograph invitation to the home and public and private clinics of this great man, I had somewhat in my sketchbook that might have proved of interest. His uniform courtesy and kindliness, his warm feeling for America and Americans, his enthusiasm and sincerity, his immense learning and clearness in imparting knowledge, his marvelous tact, gentility and preciseness could have elicited only praise from anyone who happened to know him, let alone from one who was his warm admirer. It is no wonder that, when he was gone, his great scientific attainments and his charming personality made it difficult for the authorities to fill his place. The story of his life, which has been often told, is a standing encouragement to every ambitious young doctor of slender means. Work, hard conscientious work, seems to have been its guiding motto.

Professor Charcot held his public clinics in a special hall at the Salpêtrière every Tuesday and Friday morning from 9 to 12 o'clock. Occasionally he would be delayed until near 10 o'clock. The hall was a long narrow room, lighted by small, square old-fashioned windows, with a large platform at one end and an ascending row of benches for the students. Over the platform hung the large painting of Pinel. On the platform were a long table for the use of his private pupils and assistants, and a series of high back benches for invited guests and the patients to be presented to the class. Aside from a loud-ticking clock over one of the doors, the walls were devoid of every sort of ornament. From a small door leading out from an anteroom, we would follow the professor on to the platform, making a goodly sized procession of assistants, secretaries, students, guests, visitors and patients. The class upon the audience benches consisted of about one hundred and fifty men and women, intent, studious and ready with note books to take down the first words uttered by the lecturer. The professor always wore a small, tight-fitting scull-cap and remained sitting during the entire discourse. His style was smooth, regular and systematic, resembling a memorized sermon, and showing a calm, complete mastery of the subject in hand. Rarely, he would get up to make some examination himself upon a patient or indicate some point he was impressing upon a diagram. Usually his assistant, Gilles de la Tourette, would do that for him. He used very few gestures and generally would keep his gaze fixed upon the back of the room over the heads of the students, as though he were in a sort of reverie. He rarely attempted any humor, and when it did arise it usually had its origin in the patients or something apart from the speaker himself. Whenever he was lecturing upon any one special disease, he would line up a number of patients, as many as twelve or fifteen sometimes, upon the platform. If it were necessary he would insist upon their divesting themselves of every stitch of clothing, so that as some one said, they looked like a row of innocent Fiji Islanders. Rarely, if ever, did he put the women to this wholesome exposure. When the hour of noon arrived, a large gong would sound, the last sentence would be completed and in a quiet, methodic way the professor would suddenly rise and vanish through the side door.

In his daily private clinics, in a small room before half a dozen or more pupils, he would appear less methodic and showed more of his natural disposition toward friendship and personal intimacy. Here all kinds of cases would be examined, discussed and minutely studied. To observe him make a differential diagnosis, as for instance, between hysteria and syringomyelia in a man without a clear history, was a treat in close logic and correct inference. The French nation are reputed to be a neurotic people. At all events they present to the science of medicine a goodly amount of psychosis and neurosis for study. Happy was it that so calm, industrious, logical and dispassionate an observer as Charcot arose and studied amongst them. The debt which not only neurology but the whole of medicine owes to this master can never be repaid and will probably scarcely ever be equaled by another.

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## THE EVIDENCE OF INSANITY; AN OUTLINE.

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### GENERAL CONSIDERATIONS.

The whole question of insanity hinges on the *origin*, the *support* and the *display* of ideas. Its pathology has nothing distinctly characteristic, being merely a measure of functional incompetence whatever the coexistent facts. But as all motion is potential in ideas, ideation has its equivalent in molecular change and thus mental aberration has its physiologic concomitants.

No mortal can be said to be free from errors of fact or opinion of one kind or another, but comparatively few resist demonstration—logical, or objective refutation. An idea that does not fit with popular belief is not necessarily a delusion. Indeed, if it does not clash with any demonstrable principle or particular fact, it can not be regarded as a delusion, for we have no other means of proving it false than by such evidence. It may be an intuitive prophecy or the product of a genius. The grand steps of civilization were often due to conceptions which at their birth were commonly regarded as "off" or insane, and it is quite in keeping with the order of things that exceptionally profound minds should discover truths beyond the ken of contemporaneous comprehension. The common mind, the non-meditative, is so much a product of our political, educational and social machinery that comparatively few think deep enough to think much differently, and the machine-made creature or social puppet is regarded as quite sane though he may hold all the delusions agoing, which by and by are exploded by what he may call a "crank."

The higher walks of life are hardly freer from delusions than are the lower, to-wit: Only a few years ago, the so-called Darwinian theory of evolution became epidemic in certain learned circles although based on absolutely nothing but circumstantial evidence. Since then many of its votaries have so qualified the theory that it has lost its original peculiarity of something from nothing, and now it stands for little more than the progress of a plan as yet too feebly perceived to reveal much of origin and purpose, but disclosing the immutability of entities (characteristic or essential powers) by which chaos is precluded and progress assured. What is potential in plan must be specific and definite in form, and can never intrinsically be less or more in essential characteristics. One word more on this point: Laws of nature are said to be immutable; they must be, or chaos would result. But laws are not separable from things (entities), they are identical with their properties; therefore specific entities are immutable. Again, specific entities must be created, not evolved (form and activity are conditioned by environment and have reference to growth and chemic union). They can not lose their intrinsic (specific) qualities unless we say it is a law that laws are not necessarily immutable, which is a *reductio ad absurdum*. Evolution is extension not addition. I am not writing to prove the delusional nature of Darwin's hypothesis, which by some has been accepted as an established fact. But the logical results of a truth are not acts of insanity. Some twenty years ago when the theory was dominant, and while its sister delusion "spontaneous generation" also had a spurt, a young Englishman, while out of employment and discouraged, suicided by jumping from a river bridge. He left a note stating "man is but a monkey, so I didn't care to live." This was not an accurate statement of Darwin's idea, but it contained the popular notion having a fatalistic principle. What is the criterion for this suicide's act? Was the act that of insanity, or was it a logical result of prospects, both immediate and remote, in the light of the existing conditions?

But the history of civilization is full of popular delusions varying and vacillating, and sometimes violently active. They were originated as they also now are, by circumstantial evidence, a form of suggestion, and prevailing by virtue of a common fitness, a common degeneracy. The familiar biblical expression, "my sheep" implies both the idea of enfeeblement and the need of a leadership to overcome the prevailing delusions and conditions therefrom. It applies now as then, for just as water can not rise above its own level, so the individual mind can not transcend its own powers of comprehension without extrinsic aid. He needs the stimulus of a reinforcement, coördinate with cosmic plan. It is a curious fact that in spite of the self-evident truth of our absolute dependence, we almost totally ignore it, and by our acts imply that the world was made wrong. This is the root of criminality, which is the remote or immediate background of all insanities, and moral palsies—their last analysis.

*Definition of Insanity.*—A delusional state of mind fixed against reason. By this I mean that a delusion exists either manifest, subconscious or latent, just as any idea may be, and that neither the logic of facts nor objective evidence are effectual to dissolve. It applies equally to fleeting and fixed delusions. Reason is futile for dissolution, although it may sometimes have a subduing or eclipsing effect for a time more or less brief. This state is due to such a degree of brain inefficiency, that the energy production is inadequate for the attention required for a complete conception of the situation. By a manifest delusion I mean a delusion so dominant that most of the subject's conduct is regulated by it; by a subconscious delusion I mean a delusion which is not manifest unless elicited by inquiry; by a latent delusion I mean a delusion which practically does not exist in definite form, but has existed, and although inquiry may only elicit a denial, certain circumstances may evolve it and in a violent manner, as in some forms of epilepsy and recurrent mania. Such cases are both the most dangerous and most difficult to pass upon.

*Character of Delusions.*—A delusion is an idea which is incorrect in time or in place, or is non-existent in fact. It becomes an insane delusion by virtue of its fixity against reason—the futility of argument.

*Origin.*—Insane delusions have three origins: 1, delusions due to more or less remotely acquired errors of perception and with present mental incompetency—centric delusions; 2, delusions due to perceptive perversions of sensation arising within the nervous system, and with present mental incompetency—hallucinations; 3, delusions due to perceptive perversions of sensation arising at the periphery or end organs, and with present mental incompetency—illusions. All three forms involve perception, reason and will.

*Support.*—1. An insane delusion may be more or less plausible by virtue of circumstantial evidence, as when some of the factors are truths, as is sometimes the case in delusions of conspiracy to deprive of property or personal liberty. 2. An insane delusion may be monstrous, by containing a claim against all evidence or possibility, such as a claim to be the "mother of God" or a "horse." In my opinion many such delusions are not real, but sportive, as their subjects' conduct is commonly very inconsistent with the delusions.

*Display.*—1. An insane delusion may be: *a*, active or directly manifest and unreserved; *b*, subconscious or indirectly manifest and reserved; *c*, latent, as in lucid intervals, when it has no formal existence. 2. They may be: *a*, persistent, *b*, changeable, *c*, recurrent. 3. They may be of: *a*, grandeur, as of wealth, power,

rank, form, etc.; *b*, persecution, as of poisoning, torture, defamation, etc.; *c*, debasement, as of personal vileness or incompetence, etc.; 4. They may exist with: *a*, excitement, *b*, depression, *c*, composure.

The more centric physiologic concomitants of insanity are indicated by the degree of promptness, pertinence, distinctness, fluency and coherence of speech.

The other physiologic concomitants, which may or may not be present, are tremors, palsies, incoördinate muscular movements, sensory defects, nutritional changes and emunctory irregularities in addition to the purely psychic phenomena.

It may be stated as a rule that the less the physiologic concomitants are manifested the more obstinate the insanity, because the more insidious and subtle is the centric (cortical) defect. It also may be said that as a rule hallucinations with insanity indicate the worst prognosis owing to their being due to a more gross physiologic disturbance of centric areas than are purely centric delusions, and which when they do not speedily recover, generally result in a more serious and permanent damage to the brain. Illusions being due to peripheral perversions are as a rule the least serious indications.

Whatever of abnormal mind is not included in my definition of insanity will come under the headings of moral palsy and criminalty.

*Definition of moral Paresis.*—A defective power of inhibition (will) to such an extent that although the subject may know a particular act is wrong, he is unable to refrain from doing it under special exciting circumstances or provocation. It is due to a defective action of the brain which may be caused by cranial injury, shock, fever, poisoning, inherited fault, habits of dissipation of one kind or another, etc. It includes some cases of inebriety, neurasthenias (hysteria, hypochondria, etc.), fad manias (fanaticism), violent temper, vagrancies, prostitution, etc.

*Definition of Criminality.*—A disposition of conduct in which selfness is the ruling principle existing with the power of discernment and the power of choice. It is due to a denial or eclipse of first principles. The incentives are position, wealth and pleasure to be obtained at the expense of truth, justice and economy when in conflict with purpose. There is a total absence of fraternal love in the humanitarian sense.

In criminality there is a delusional origin in reference to First Principles, and is therefore constitutional. Education is the remedy. In insanity the delusional state is incidental to a pathologic cerebration, and can only be remedied by physiologic means. The remedy for moral palsy is chiefly discipline.

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## THE STATISTIC EVIDENCES OF THE VALUE OF VACCINATION TO THE HUMAN RACE, PAST, PRESENT AND FUTURE.

Read before the American Medical Association at the Jenner Centennial Celebration, held at Atlanta, Ga., May, 1896.

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(*Continued from page 677.*)

PROPOSITION 5.

Notwithstanding a marked decrease has occurred in the total smallpox death rate, a still greater decrease has taken place in the smallpox death rate among children.

From the mass of statistics at hand to demonstrate this proposition I select the evidence relative to the value of vaccination as shown by the enforcement of the compulsory laws of Great Britain.

In reckoning the success or failure of compulsory vaccination in Great Britain, we must remember that the law was enacted to protect helpless children from the fatal consequences to themselves of obduracy or carelessness of the parent in failing to protect them from smallpox by having them vaccinated. Let us take this epidemic of 1870–73, which has afforded vaccinophobists such an arsenal of facts to prove the worthlessness of vaccination, and see if in enacting compulsory vaccination laws the State exercised a wise and prudential care of its infantile population. Prior to the enactment of compulsory vaccination laws, 70 to 80 per cent. of the annual smallpox mortality of Great Britain was among children under 5 years old. What has been the average annual mortality in this class since compulsory vaccination? Take England first. The law requires vaccination of children at three months of age. The compulsory vaccination law of 1853 was very defective in that the machinery provided for registration of births, and vaccinations thereafter, was not such as to enable the authorities to know and secure the vaccination of all the children falling within the provisions of the law. Defective as it was in this respect, it yet had a salutary effect, for the vaccinations among this class were more than doubled over the same period anterior to the enactment of the law. It must be admitted that this result was largely due to the knowledge of parents that if they failed to comply they laid themselves liable to a penalty for such neglect. In a few years we see the annual smallpox death rate reduced to 55 per cent. of the total mortality from this disease. Fifty-five per cent. remained the average annual mortality in this class until the laws of 1867 and 1871 were enacted. By the law of 1867 a full and proper system for registering compliances with the compulsory law was inaugurated. Boards of Guardians throughout the kingdom were authorized by law to compel such compliances, and were given full authority to appoint officers whose duty should be to rigidly inquire into all failures to comply with the law. When such persons were found, these officers should warn the delinquents to comply with the law within a specified time, and if such persons failed to heed the warning the officers were to institute legal proceedings to require compliance. By the act of 1871 Boards of Guardians were required to appoint such officers. The epidemic of smallpox commenced in the latter part of 1870, and we are told that "only a portion of the population in England under 5 years of age was within the operation of the act of 1867. During the continuance of the epidemic a larger proportion came under its provisions, and some came also under the provisions of the act of 1871. The result was manifested in a reduction of the proportionate smallpox mortality under 5 years of age from 55 per cent. of the entire mortality from that cause to 33.5 per cent. in 1871, and to 30 per cent. in 1872. The act of 1867, being in some of its most important requirements permissive only, had been carried out with various degrees of efficiency by different local authorities. In those places in which the action taken under it had been tardy and ineffective, the mortality in young children amounted to or approached its old proportions; in those places in which such action had been commenced immediately on the act coming into operation, and been steadily continued, a remarkable diminution in that proportion was observed."[24]

LONDON.

Anti-vaccinists gleefully ask: How about the smallpox death rate of London in 1870–73? Let us examine into the matter. For twenty years prior to 1871, when the authorities provided gratuitous vaccination, but when compulsion was really nominal, the smallpox death rate of children under 5 years of age was more than 50 per cent. of the total smallpox death rate. From 1851–60 it was 59.5 per cent., and from 1861–70 it was 54.3. In 1871 and 1872, notwithstanding the negligence of the authorities of some of the unions in relation to enforcing vaccination, the average annual smallpox death rate of children under 5 years of age to the total of smallpox mortality was 36.7. In the epidemic of 1881 children under 5 years of age contributed only 27.8 per cent. of the total smallpox mortality of London.[25] In 1872, in Great Britain, only 85 per cent. of the births were certified as successfully vaccinated. Deducting the percentage of children having died before being vaccinated, the percentage vaccinated to the total births living was 94 per cent. certified as successfully vaccinated.

SCOTLAND.

How about Scotland? Mr. P. A. Taylor makes himself happy

[24] Dr. Seaton's Report in Report of Medical Officer of Privy Council, 1874.

[25] Eleventh Annual Report of Medical Officer of the Local Government Board.

over the failures of compulsory vaccination in Scotland. Upon what is his opinion based? Let us see. Here is a fair test, for the compulsory vaccination law of Scotland was enacted Jan. 1, 1864, and from that date to Dec. 31, 1871, the report of the registrar general for Scotland states, that after a deduction had been made of all children who had died before they could be vaccinated, 96.5 per cent. of all children alive were certified as having been successfully vaccinated. One per cent. was certified as being in such health as to prevent vaccination, or having been repeatedly tried and found insusceptible, and 2.5 per cent. unaccounted for on the registers. From this it appears that the children in Scotland under 7 years of age were protected by vaccination to a remarkable degree. But, as has been well said, "it is equally obvious that the whole infantile population can not be universally vaccinated, nor constitute a class among whom if smallpox prevail in the country there could be any reasonable expectation of meeting with complete exemption from that disease, for it includes, 1. all who are under the age by which vaccination is enforceable, of whom, of course, a very large proportion would remain unvaccinated; 2, not a few somewhat above that age are still remaining unvaccinated from the carelessness of their parents in neglecting to have vaccination done till they had received legal notice of warning and risking it probably for some time after that; 3, children in whom there was postponement of vaccination on account of their state of health; and 4, many doubtless still unprotected among the cases which had appeared in each year's return as 'postponed,' 'insusceptible,' or 'unaccounted for.' Now, as there are nearly 120,000 children born in Scotland each year who until they are 6 months old do not come under the operation of the law; as there are about 1,000 of each year's births carried on as 'postponed' or 'insusceptible'; and as there are about 2,500 annually respecting whom nothing is known, it is quite certain that there must always at any given time be among the young population of Scotland, extremely well protected as it is on the whole, a considerable actual number of unvaccinated children."

Now for the results of this unprecedented vaccination in a community of civilians. From year to year, prior to compulsory vaccination, the average annual smallpox mortality in children under 5 years of age amounted to 74 per cent. of the total smallpox mortality in Scotland. To fairly test the prophylaxis afforded by compulsory vaccination, we must take the children under 7 years of age, the epidemic having begun in 1871. The returns of the registrar general are only divided as follows: Those under 5 years of age, 5 to 20, 20 to 60, and those above 60 years of age. We therefore take those under 5 years of age, they being only those which can be used to test the value of compulsory vaccination. From the enactments of the compulsory law in 1864, the mortality of this class steadily declined from 74 per cent. of the total smallpox mortality, until in the epidemic of 1871 it was for the whole of Scotland just 21.4 of the total smallpox mortality. The mortality for the whole of Scotland had not been ascertained when Dr. Seaton (from whose reports these data are extracted) rendered his report in 1874. But let us take the eight principal towns of Scotland, from which to derive further information on the subject.

SMALLPOX DEATHS IN THE PRINCIPAL TOWNS OF SCOTLAND.

| Year. | At all ages. | Under 5 years of age. | Deaths under 5 years of age; per cent. of total deaths. |
|---|---|---|---|
| 1871. . . . . | 886 | 195 | 22.0 |
| 1872. . . . . | 1,337 | 302 | 23.5 |
| 1873. . . . . | 467 | 124 | 26.5 |
| 1874, to June inclusive. | 302 | 69 | 22.8 |
| Total, 3½ years . . | 3,192 | 750 | 23.5 |

Well may the registrar general, in his report for 1872, say, in his comments on that year—"If the same relative mortality had taken place in children at that age (under 5 years) as occurred during the previous epidemics, when they were less efficiently protected by vaccination, instead of only 302 children under 5 years of age having died from smallpox in the eight towns during 1872, 3,370 would have died. The enforcement of the vaccination act, therefore, during the seven previous years, appears to have had the effect, in those eight towns alone, of saving the lives of upward of 3,000 children." So much for the direct proof from the history of Scotland as to the beneficent effect of compulsory vaccination. Now let us compare the relative mortality of children under 5 years of age in Scotland with other countries. A glance at the following table will show the superior effects of the law of Scotland:

SEATON'S REPORT, 1874.

| Towns, or groups of towns, compared. | Actual smallpox deaths under 5 years of age during the whole period of the epidemic in each town, or group of towns. | Smallpox deaths under 5 years of age during the whole period of the epidemic for equivalent population of 1,000,000 of all ages. |
|---|---|---|
| Eight principal towns of Scotland (population 1,083,760), 1871–74. . . . | 750 | 692 |
| Berlin (population 882,569), 1871–72 | 2 837 | 3,448 |
| Hamburg (population 338,974), 1871–72. . . . | 1,938 | 5,717 |
| Leipsic (population 106,925), 1871. . . . . | 659 | 6,200 |
| Eight principal towns of Holland (population 663,080), 1870–72. . . . . | 4,474. | 6,445 |

Compare next the smallpox mortality under 5 years of age with the population living under that age, respectively, in the various towns or groups of towns.[26]

| Towns, or groups of towns, compared. | Population living under 5 years of age. | Smallpox deaths under 5 years old during entire period of the epidemic in each place. | Smallpox deaths under 5 years of age during whole time of epidemic for equivalent of populations of 100,000 children under that age. |
|---|---|---|---|
| Chief towns of Scotland (3½ yrs.) | 147,433 | 750 | 508 |
| Berlin (2 years.). . | 88,093 | 2,837 | 3,200 |
| Leipsic (1 year.). . | 8,545 | 65 | 7.712 |

These are the only towns in which the data for this last table were at hand for comparison when the table was formed in 1874. Assuredly there must be some patent reason for this variable death rate of infantile populations in the countries having compulsory vaccination laws. Let us try and find it. A brief review of the law, together with the manner of its enforcement in the respective places, will perhaps enable us to solve the problem.

1. *Scotland.*—We have just seen the wonderful utility of compulsory vaccination in Scotland in comparison with the other countries specified in the tables just given. The law is stringently enforced, and the machinery therefor is complete, as evidenced by a vaccinated population under 5 years of age of 96½ per cent.

2. *Berlin.*—In Berlin the law required that all children should be vaccinated at one year of age. No penalty, however, was attached to neglect to comply with the law, unless smallpox follows such neglect. The delinquents were rarely prosecuted, and a good proportion failed to have their children vaccinated until they attained school age. All children seeking admittance to the public schools had to present a certificate of successful vaccination before being received therein. Dr. Guttstadt, in 1873, attributed the high mortality in Berlin in the epidemic (1871-1872) to a large accumulated number of children, whose parents had failed to have them vaccinated at 1 year of age, as required by law.

3. *Hamburg.*—There was not at the time of the outbreak of the epidemic any compulsory law, and no means to prevent parents from neglecting to have their children vaccinated, except a law which required all children applying for places in the public schools to produce a certificate of successful vaccination. Therefore it was common to find children who had attained 2 years of age, and often 7 or 8 years, before vaccination was attempted. This large residuum of unvaccinated children is sufficient to account for the greater prevalence of smallpox in Hamburg than in those of Scotland.

4. *Leipsic.* } The same was substantially true of these as in
5. *Holland.* } Hamburg.

IRELAND.

What of compulsory vaccination in this country? triumphantly ask the anti-vaccinists. Let us test it first upon the children under 5 years of age, the class whom primarily the law was intended to protect. The compulsory vaccination act of Ireland came of force Jan. 1, 1864. The machinery for registration of compliances with the law, as well as the lack of officers to warn delinquent parents whose children remained unvaccinated beyond the prescribed age (six months), and to take the necessary steps to enforce compliance with the law, shows the act to be more defective than that of Scotland.

By the report of the public vaccinators to the local govern-

[26] Seaton's report 1884.

ment board of Ireland, compared with the register of births from 1865 to 1872 inclusive, it is shown that 81 per cent. of the births were vaccinated by the public vaccinators. (The public vaccinators do almost the entire vaccinations in Ireland, except in the large towns.) In Scotland the percentage of these vaccinations has been shown to be 96½ of every 100 births. We therefore see that in Ireland there is always a very large residuum of unvaccinated children, there being in 1872, 33,440 children who were not vaccinated until they had attained one year of age. In 1873 there were 19,258 such cases. Let us now compare the smallpox death rate of this class with the total smallpox mortality of the periods anterior and subsequent to the compulsory act. Seventy-nine per cent. of the total smallpox mortality of Ireland was in children under 5 years of age, as shown in the report of the epidemiological society in 1853. Under the medical charities act, and the act of 1858, the public vaccinators had been enabled to reduce this percentage to 75. By the operation of the compulsory vaccination act, in 1865 and 1866, the percentage of this class of deaths was reduced to 50. From 1866 to 1871 smallpox was almost wholly absent from Ireland. When the epidemic of smallpox began in 1871, it found the children under 7 years of old remarkably well vaccinated, and as a consequence we find the percentage of deaths in this class as follows: 1871, 20.5, and in 1872, 25 per cent. of the total smallpox mortality.

Now let us take Dublin, one of the cities especially pointed out by anti-vaccinists as an illustration of the utter failure of compulsory vaccination. In Dublin, in the two years in which the epidemic prevailed, there were 1,557 deaths from smallpox. Of this number 362, or 23 per cent., were in children under 5 years old. Dr. Seaton was unable to give the proportion which these 362 deaths bear to the total population living under 5 years of age. But he shows the comparative mortality to the whole population of Dublin, and contrasts these with the following places. The deaths under 5 years of age per million of living population in each place were as follows:

| | |
|---|---|
| Dublin | 1,150 |
| Eight principal towns of Scotland | 592 |
| Dutee | 1,534 |
| Berlin | 3,448 |
| Hamburg | 5,717 |
| Leipsic | 6,200 |
| Chief towns of Holland | 6,455 |

Let us see what has been the result of compulsory vaccination upon the whole population of Ireland. From the census taken in 1841 it was shown that for the previous ten years smallpox was the second most fatal disease in Ireland. The deaths in that period of time were 58,000. When the census was taken in 1851 it was found to be the third most fatal disease. For nineteen years previous to the act of 1863, the average annual mortality from smallpox was, as shown in the twenty-first annual report of the poor law commissioners for Ireland, 2,640. The compulsory vaccination act of 1863 came of force at the time of decline of a considerable epidemic. During the first year, which, it must be admitted, was too soon to be fairly claimed as wholly consequent upon the operation of the act, the deaths from smallpox were 854. From 1865 to 1870 inclusive, the smallpox mortality had fallen to such an extent as to be without precedent in the history of Ireland, being for the six years respectively 347, 180, 20, 19, 20 and 32. In the epidemic of 1871–1872, the deaths from smallpox were 665 in 1871, and 3,248 in 1872. Now let us compare the smallpox mortality of Ireland previous and subsequent to compulsory vaccination, and see what will be the result of the investigation. For nineteen years previous to the compulsory vaccination the average annual deaths from smallpox were 2,624; for ten years subsequent to compulsory vaccination the annual smallpox deaths were 583.[27] Therefore we see that under compulsory vaccination for the ten years of its operation, as compared with the nineteen years anterior to it, the deaths were not a fourth of those in the non-compulsory period.

### PROPOSITON 6.

In every epidemic of smallpox, the unvaccinated portion of the population has, without a single exception, shown a vastly greater proportional attack rate as well as death rate from smallpox relative to their numbers than the vaccinated.

### STATISTICS PROVING THIS PROPOSITION.

In a severe epidemic of smallpox which prevailed at Norwich im 1819, Mr. Cross minutely observed 112 families, in all of which there were cases of the disease; and the annexed table shows the result. Among 215 persons unprotected by vaccination there were 200 cases of smallpox, and of these forty-six proved fatal; while among ninety-one vaccinated persons the only effects of this terrible infection were: 1, that one girl, who had been vaccinated nine years, "had a mild disease, limited to twenty pocks, and lasted only six days before it began to decline," and 2, that another, who had been vaccinated five years, went through "the disease in half the time (of her unvaccinated sister) without danger or detriment, a few very minute pits upon the tip of the nose being the only permanent traces."

| | Number. | Cases of Smallpox. | Deaths by Smallpox. |
|---|---|---|---|
| Total number of persons in the 112 infected households | 603 | 202 | 46 |
| 1. Protected by previous smallpox[28] | 297 | . . | . . |
| 2. Protected by vaccination | 91 | 2 | . . |
| 3. Unprotected | 215 | 200 | 46 |

By reference to the following table, it will be seen that, in a number of places observed, the death rate varies among the vaccinated from an inappreciably small mortality to 12½ per cent., that amongst the unprotected, it ranges from 14½ to 53.8 per cent.

Death rate per 100 cases.[29]

| Places and times of observation. | Total No. of cases observed. | Among the unprotected. | Among the vaccinated. |
|---|---|---|---|
| France, 1816–41 | 16,807 | 13.12 | 1. |
| Quebec, 1819–28 | . . . . | 27 | 1.66 |
| Philadelphia, 1825 | 240 | 60 | 0. |
| Canton Vaud, 1825–29 | 5,838 | 24 | 2.16 |
| Darkehmen (Durkheim's), 1828–9 | 134 | 18.8 | 0. |
| Verona, 1828–30 | 909 | 46.66 | 5.66 |
| Milan, 1830–51 | 10,240 | 38.33 | 7.66 |
| Breslau, 1830–55 | 220 | 53.8 | 2.11 |
| Württemberg, 1831½–51½ | 1,442 | 27.12 | 7.1 |
| Carniola, 1834–35 | 441 | 16.25 | 4.4 |
| Vienna Hospital, 1834 | 360 | 51.25 | 12.5 |
| Carinthia, 1834–35 | 1,626 | 14.5 | 0.5 |
| Adriatic, 1835 | 1,102 | 15.33 | 2.8 |
| Lower Austria, 1835 | 2,287 | 25.8 | 11.5 |
| Bohemia, 1835–55 | 15,640 | 29.8 | 5.16 |
| Galicia, 1836 | 1,059 | 28.5 | 5.14 |
| Dalmatia, 1836 | 723 | 19.66 | 8.25 |
| London Smallpox Hospital, 1836–56 | 9,000 | 35. | 7. |
| Vienna Hospital, 1837–56 | 6,213 | 30. | 5. |
| Kiel, 1852–53 | 218 | 32. | 6. |
| Württemberg, no date | 6,258 | 38.9 | 3.5 |
| Malta, no date | 7,570 | 21.07 | 4.2 |
| Epidemiological Society return, no date | 4,624 | 19.7 | 2.9 |

Compare the relative death rates from smallpox in London in the epidemic of smallpox for the year ending May 29, 1881, between the vaccinated and unvaccinated. Here is the table taken from the Eleventh Annual Report of the Local Government Board, 1881–82:

| Death rate of people of subjoined ages. | Per 1,000,000 of each age of the vaccinated class. | Per 1,000,000 of each age of the unvaccinated class. |
|---|---|---|
| All ages | 90 | 3,350 |
| Under 20 years | 61 | 4,520 |
| Under 5 years | 40.5 | 5,950 |

TABLE D.—Number of deaths, and vaccinational condition, of those being over 3 months and under 10 years of age who died from smallpox in England and Wales, 1881–87.

| Vaccinational condition. | Deaths, 1881–87 |
|---|---|
| Vaccinated | 145 |
| Unvaccinated | 1,427 |
| No statement | 1,402 |
| Total | 2,974 |

NOTE.—The unvaccinated are 90.8 per cent. of those as to whose vaccinational condition there was information, and 48 per cent. of the whole.

[27] See Seaton's Report, 1874.

[28] Mr. Cross mentions that he met with several who were supposed to have had smallpox formerly, yet (p. 15) notwithstanding took it on this occasion; but he does not state whether such cases are included in the above summary. In this epidemic the vaccinated slept in the same rooms, and in some instances, in the same beds, with those having smallpox. So also (as quoted by Steinbrenner) in Copenhagen—of 659 vaccinated persons who suffered in the variolous epidemics, 1823–27, only 5 died, being at the rate of 1 in 132; while of 176 unvaccinated persons who contracted the disease, more than a fourth seems to have died, and of 153 others, who professed previously to have had smallpox, there died 31. And similarly in the epidemic of 1828–30, and part of that of 1832–37, it seems that out of 228 unprotected patients 63 had died; but of 1,373 cases of post-vaccinal smallpox only 14 were fatal.

[29] Brit. and For. Med. Chir. Rev., October, 1857.

TABLE E.—Proportion of deaths under and over 15 years of age, per 1,000 deaths from smallpox in vaccinated and unvaccinated persons respectively, 1881-87 (excluding deaths under 3 months).

| Age. | Unvaccinated. | Vaccinated. |
|---|---|---|
| Three months and under 15 years | 597 | 126 |
| Fifteen years and upward | 403 | 874 |
| Total | 1,000 | 1,000 |

TABLE E.—Statistics of the smallpox epidemic in Chemnitz in 1870-71. (See 2d Report Royal Vaccination Commission of Great Britain, 1890, page 236. Zeitschrift des Königl. Preuss. Stat. Bureau, Jahrgang 12, 1872, Art. "Die Pocken-Epidemie in Berlin, 1870-72," by D. Guttstadt.)

NOTE.—Dr. Max Schultz, writing of Flinzer's statistics, calls attention to the fact that they show there was 1 case of smallpox to every 255 households containing none but vaccinated persons, but 1 to every 26 households containing both vaccinated and unvaccinated persons. The figures prove the danger which unvaccinated persons are to the vaccinated, and thereby establish the value of compulsory vaccination. Vide Impfung Impfgeschaft, etc. Berlin, 1888.

Deaths.—Of 3,596 cases, 249 or 6.92 died. Among the deaths are those of 117 boys, 17 male adults, 111 girls and 11 female adults. All the children who died were unvaccinated, and of the adults, 3 males and 4 females were vaccinated, the remainder unvaccinated.

Of the 249 deaths, 242 were thus unvaccinated and only 7 of those vaccinated, the former category contributing 97.19 and the latter 2.81 per cent. of the deaths. Separating the cases of smallpox among the vaccinated from those among the unvaccinated persons, we find that of the former, only 0.73 per cent. died, but that of the latter class 9.16 per cent. died.

Of the 224 cases in the town hospital 184 had been vaccinated, 37 were unvaccinated, and 3 were doubtful. None of the vaccinated died, but 11 of the unvaccinated succumbed to the disease (15 cases of unvaccinated children under 10).

Hence the accuracy of the following table given by Lotz on p. 56 of his "Pocken und Vaccination."

| Age. | Vaccinated. | | | Unvaccinated. | | |
|---|---|---|---|---|---|---|
| | Cases. | Deaths. | Mortality. Per cent. | Cases. | Deaths. | Mortality. Per cent. |
| For the 1st year | 8 | . . . . . | . . . . . | 373 | 102 | 27.3 |
| For the 2d year | 15 | . . . . . | . . . . . | 528 | 51 | 9.6 |
| For the 3d year | 30 | . . . . . | . . . . . | 444 | 26 | 5.9 |
| For the 4th year | 31 | . . . . . | . . . . . | 331 | 29 | 6.3 |
| For the 5th year | 43 | . . . . . | . . . . . | 222 | 9 | 4.0 |
| For the 6th year | 35 | . . . . . | . . . . . | 197 | 7 | 3.6 |
| For the 7th year | 46 | . . . . . | . . . . . | 105 | 1 | 0.9 |
| For the 8th year | 28 | . . . . . | . . . . . | 98 | 2 | 2.0 |
| For the 9th year | 18 | . . . . . | . . . . . | 71 | 1 | 1.4 |
| For the 10th year | 71 | . . . . . | . . . . . | 71 | . . . | 0.0 |
| Total under 10 years of age | 265 | . . . . . | . . . . . | 2,410 | 220 | 9.0 |

*(To be continued.)*

# SOCIETY PROCEEDINGS.

## The American Public Health Association.

[Special Correspondence of the JOURNAL.]

*The Twenty-fourth Annual Meeting of the American Public Health Association held at Buffalo, N. Y., Sept. 15-18, 1896.*

The Executive Committee, in which all the business, other than reports of committees and presentation of papers, is practically done, and which is composed of the five officers, six elected members and the thirteen surviving ex-presidents, nine of whom were actually in attendance, met at 10 A.M., September 14, and was in continuous session the greater part of the day, and during the intervals of the regular sessions throughout the week.

Ellicott Square, in which the meeting of the Association was held, is a marvel of modern construction, occupying the entire block of ground, the value of the site alone being rated at $1,000,000, and the cost of the building, complete in all its appointments, having amounted to $2,350,000 more. The dimensions of the edifice are 240 x 200 feet, with an interior court 110 x 70 feet in size, glass roofed and giving abundant light to the 600 offices, 16 large counting rooms and 40 stores, besides the quarters of the Ellicott Club, which occupies nearly the whole uppermost (tenth) floor, and the assembly rooms on the second, in which the Association held its meetings. The principal room was gracefully and appropriately draped with the national flags of the United States of America, Dominion of Canada and Republic of Mexico, which countries are represented in the membership, but the abominable acoustics of the hall, due to the numerous intervening columns, and the medley of noises from the streets, make it a trying ordeal for the speakers to reach their distant auditors. The extensive daily programs for morning, afternoon and evening sessions were carried out without failure, and the interest of the members in their work was shown by their persistent attention and regular attendance to the adjournment on Friday afternoon.

The appointed hour found about two hundred and fifty persons on the floor, the adjoining offices of the Treasurer and Local Committee being crowded with members awaiting their turns to register. The Mexican contingent numbered thirty-four persons and that from the neighboring Dominion almost as many more. A number of women were present, and as a daily paper later commented: "The languare of some of the papers opened their eyes to the brusque directness with which scientific sanitarians deal with rather intimately personal problems."

The Association was called to order by the President, Dr. EDUARDO LICEAGA of the City of Mexico, promptly at 10 o'clock, and the session opened with prayer by the Rev. Dr. Thomas R. Slicer of Buffalo, after which the President called to the platform and introduced to the members the distinguished founder of the Association, Prof. STEPHEN SMITH of the city of New York, and its first President during the years 1872, 1873 and 1874, after which time he declined reëlection. Dr. Smith, after responding to the enthusiastic welcome which greeted him, disclaimed any special merit in the creation of the Association, which he declared to have been the logical outcome of the times, and paid generous tribute to his associates in the work, especially Dr. ELISHA HARRIS of New York, who with himself bore the entire expense of the early meetings. He also instanced Dr. Joseph M. Toner of Washington, D. C., Dr. Edwin M. Snow of Providence, R. I., Dr. John H. Rauch of Chicago, Ill., Dr. Ezra M. Hunt of Trenton, N. J., and Dr. Charles B. White of New Orleans, La., the latter the first of the Presidents to die, although all the others mentioned, who successively occupied the presidential office, and were his earnest co-workers from the beginning, have subsequently died. He extolled the wisdom of the Association in having adhered to the practice of placing its mere working business in the hands of the Executive Committee, and thus removing disputations and time-consuming contentions from the floor of the general meeting, to the interference with its legitimate and more important labors. While it has included some of the best men in the profession among its members, there were many others who were not medical, among them the Rev. Dr. Osgood, Dorman B. Eaton, Commissioner of Education, and others. This Association does not limit its influence to those in actual attendance at its meetings. The larger audience outside of the Association give it its distinctive character. He was especially gratified at the interesting feature of its development, which has made it eminently all-American, through the extension of its membership to Canada and Mexico, and hoped that Cuba and the Central American republics might also become part of it. This international association is all the more gratifying since experts in sanitary science are aware that no single country can protect itself, except so far as the English system obtains of making localities clean, instead of remaining apart and trying to fight epidemics. A clean country is primarily a healthy one. The Transactions of this Association, he was proud to say, have become an invaluable compendium of sanitary science, and Florence Nightingale wrote, years ago, that she could gather nowhere in Europe such information as was to be obtained in the reports and papers published by this body. Perhaps the grandest work accomplished by the Association has been in the development and extension of State boards of health all over this Union—and it is very gratifying to see by the programs the prominent part taken by officers and members of State and provincial and municipal boards of health in its work.

On the conclusion of ex-President Smith's remarks, the Chairman of the Local Committee of Arrangements, Dr. ERNEST WENDE of Buffalo, Commissioner of Health of that city, made the customary announcements of entertainments tendered the members and their families, which in accordance with the traditional practice of this Association, were only such as would not interfere with the purposes of its assembly. The Local Committee had prepared a very attractive, both in typography and contents, souvenir brochure, edited by Dr. WILLIAM WARREN POTTER, Chairman of the Committee on Printing, containing well executed portraits and biographic sketches of the officers, lists of committees and other necessary

information especially valuable for new members; and a novelty in the way of a membership badge, having a gilt buffalo surmounting and suspending by a tri-colored riband a gilt emblematic pendant. Each member was further supplied with a little book of detachable coupons, entitling those duly accredited to daily afternoon drives in tally-ho coaches, intended especially for wives and families during the attendance of their husbands and fathers at the sessions, and admitting to excursions and receptions—a most admirable provision against the intrusion, common to such occasions, of persons in no way interested in the Association as entertainers or participants.

The report of the Executive Committee was presented by the Secretary of the Association, Dr. IRVING A. WATSON, Secretary of the State Board of Health of New Hampshire, who performed this duty for the fourteenth successive annual occasion, making the usual announcement of the prospective business of the session, and reporting a communication from the Association of Master Plumbers of Canada, signed by their Secretary, J. C. Hughes, of Montreal, recommending the constitution of a committee on sanitation with special reference to drainage, plumbing and ventilation of public and private buildings, and such a special committee of five members was thereupon authorized. The Executive Committee further recommended the passage of a resolution, introduced by Dr. SAMUEL H. DURGIN, Health Officer of the city of Boston, reviving the committee on disinfectants and disinfection, whose former report has been so many years the standard authority on these subjects, but which in view of recent experimental research and discoveries ought to be given the opportunity of including this later knowledge. The Secretary then reported the names of fifty-three new members, recommended by the Executive Committee for election, which was accordingly done by vote of the Association.

The eminently practical and expeditious manner in which this Association dispatches its routine and administrative business through its Executive Committee, permitted the legitimate work of the session to begin promptly at 10:45 A. M., with the "Report of the Committee on Car Sanitation," by Dr. GRANVILLE P. CONN, President of the State Board of Health of New Hampshire, Chairman. This report attributed much of the opposition of railway corporations to their disinclination to submit to the interference with their business and the expenses which the necessary charges required for their improved sanitation would involve. It spoke of bad ventilation of passenger coaches as worse than their overheating, denounced the objectionable practice of closing windows and locking doors after a trip, instead of throwing them wide open for thorough airing, and advocated the abrogation of the existing system of urinals. It backed the American railway employe against the world for disregard of passengers' comfort, and for habitual insolence nothing could equal the negro porter. It commended the *train de luxe* from Paris to Marseilles as an instance of what can be done to promote the health and comfort of travelers and wondered that any one who has had the opportunity of contrasting this service with the American system could hesitate to give credit where it belonged.

Two papers on the same subject followed: "Observations on the Cleaning of Railroad Passenger Cars," by Dr. DOMINGO ORVANANOS, of the City of Mexico, Secretary of the Superior Board of Health of the Republic of Mexico; "Possibilities of Contagion of Venereal Diseases in Railway Cars," by Dr. TOMAS NORIEGA, delegate from the State of Chiapas, Mexico. The former advocated instead of the customary slipshod method of washing coaches, that they should be carefully gone over with sponges saturated with a solution of mercuric bichlorid, that the coverings of seats and backs should be frequently changed and washed at every terminal station. Dr. Noriega narrated instances in his experience of purulent ophthalmias, unmistakably one to infection in Pullman car lavatories, resulting in total loss of vision of one or both eyes. He said that reform was necessary especially in beds, lavatories and water closets, and that in the latter, impermeable paper covers, to be removed after each visit, should replace the present permanent wooden seats. In the discussion which followed, Dr. Valentine of New York quoted the case of a bride, referred to him by another physician, who had contracted a specific ulcer on her lip by drinking from a public ice-water cup, and said that in Antwerp he had seen fresh wooden covers supplied to each new occupant of a water-closet. Dr. Kinyoun of the U. S. Marine Hospital Service, said that the hygiene laboratory of that service under his direction had been long engaged in investigating railway sanitation, and said that experiments were being made as to the proper disinfection of cars by subjecting all the several materials used in furnishing coaches to various processes. He suggested the inquiry as to the greater prevalence of cases of tuberculosis and diphtheria at the railway terminals and at the resorts for invalids affected with these diseases. He said the impure water supply in the railway service was responsible for many cases of diarrheal and enteric diseases, and declared that it was significant that the presidents and high officials of these companies do not drink the water they furnish to passengers.

The "Report of the Committee on Steamship and Steamboat Sanitation," by Dr. FREDERICK MONTIZAMBERT of Toronto, General Superintendent of Quarantines of the Dominion of Canada, Chairman, was then read. Dr. Montizambert said he had little to add to the reports made by the former Chairmen of the Committee, Dr. Durgin of Massachusetts, in 1891, and Dr. Gihon, U. S. Navy, in 1893, except to call attention to the proposed disinfection of ships by the electrolysis of sea water, a process actually in use by the French companies of the *Messageries Maritimes*. At the exhibition at Boulogne-sur-Mer, there was an automatic apparatus no larger than a coal scuttle, which could be connected with the ordinary electric plant by a couple of wires and was capable of producing three hundred liters of electrolyzed sea water per hour. The usual methods of disinfection, involving the employment of costly materials, were malodorous and left much to be desired.

Dr. HORLBECK of Charleston, S. C., declared that enough had not been said about the wretched sanitary condition of our coastwise passenger steamships, and Dr. GIHON, U. S. N., described his present knowledge of the deplorable condition of the saloons of these vessels during their late autumn passages when crowded with consumptive invalids on their way to health resorts in Florida.

AFTERNOON SESSION.

The afternoon session began 3 P.M. with a paper on "The Composition and Infectiousness of Milk," by Dr. JAMES F. KENNEDY of Des Moines, Iowa, Secretary of the State Board of Health of Iowa, and was an exhaustive inquiry into the relative mortality of breast-fed children and those fed on milk, the latter being greatly in excess. He attributed a large proportion of the deaths to inanition from dilution with water, which is not only a fraud against the buyer but a crime against the children, who are literally starved to death. He narrated epidemics due to infected milk, which was a greater source of danger than dilution, and described the many ways by which morbific germs are introduced into milk—by washing pails with impure water, by the settling in pails and cans of dried germs floating in the polluted air of stable-yards, by the unclean hands of milkers, and after reaching consumers by the filthy habits of occupants of insanitary houses. He declared the remedies to be inspection, cleanliness and sterilization.

The next paper on the program was "On Pure Milk," by Dr. GARDNER T. SWARTS of Providence, R. I., Secretary of the State Board of Health of Rhode Island, who deplored the neglect of milk inspectors and physicians in his own State to ascertain the actual condition of the milk supply. He said that most of the enteritis of children was certainly due to filthy milk. He urged the establishment everywhere of milk farms similar to those near Buffalo, where the modus operandi of milking and delivering milk is carried out under the most healthful conditions and the purity of the milk certified by reputable physicians. The price of such milk must necessarily be higher, and it is only by educating the public that they can be made to pay the difference and to secure immunity from disease, which is more surely done in this way than by sterilization. There are people to day who prefer dirty milk at four cents to good milk at eight.

The "Report of the Committee on Animal Diseases and Animal Food" was then read by Dr. D. E. SALMON, D.V.M. of Washington, D. C., Chief of the Bureau of Animal Industry, Department of Agriculture, Chairman, who, while describing how much had been done in the matter of animal diseases, said that the public still needed to be educated respecting them. Outbreaks of anthrax were undoubtedly becoming more frequent. While common in Europe, this disease had been rare here. The spores of the bacillus survive for years and are distributed through carelessness in the disposal of dead animals. The carcases should be saturated with coal oil and burned to ashes. Hides and wool are dangerous and even the hay from infected meadows used for packing crockery and glass. Tuberculosis is the subject of much attention on the part of the government, which, however, can only prevent the shipment of diseased cattle to other States, but has no control over its local sale. Tuberculous cows and swine are often found in the abattoirs, but there is necessity for coöperation between Federal and local inspectors. Some local firms insist on selling condemned carcases. The committee testifies to the amicable relations between the Bureau of Animal Industry and the

State Boards of Health, due largely to the influence of this Association. An interesting part of the report dealt with rabies, which declared that while there was no need of alarming people, it was a duty to inform the public that such a disease does exist and is a menace to health and safety. The Chairman had sometime ago to combat the theory that there was no such disease as Texas fever. Is it reasonable to believe that a disease that has been described for two thousand years is a myth because a few physicians have never seen a case. The committee has sufficient positive evidence to establish its existence and characteristics, and recommends the measures for reducing the number of worthless dogs be rigidly enforced, and that all others allowed to run at large be muzzled.

This group of papers attracted great attention and provoked a very lively discussion. Dr. BAILHACHE while approving of the thorough supervision and inspection of dairies and dairy products recommended by Dr. GARDNER T. SWARTS, doubted its practicability. Dr. LEE of Philadelphia took issue with Dr. KENNEDY respecting the sterilization of milk, in which he did not believe we had arrived at a sanitary ultimatum. Since the practice two diseases have become prominent—infantile scurvy and rickets—which were not recognized when he studied medicine. Fresh pure milk is better than sterilized, but he agreed if we are to cook milk at all we had better do it thoroughly. Boiled milk is better than sterilized. Dr. HIBBERD of Indiana, ex-President of the AMERICAN MEDICAL ASSOCIATION, questioned whether it had been established that any child had been diseased by milk from tuberculous cows, taken into its stomach. He had never had a positive, indisputable reply to the question: Can tubercle bacilli pass the digestive organs? He believed that sterilized milk starved children to death. Dr. LYMAN of Massachusetts said as it was possible for a child to be exposed to cold and not take cold, it was equally possible for it to live in a family where tuberculosis and similar diseases exist and not contract them. He believed that the development of the general health by proper sanitary environments will be a better protection against disease than any special method of asepsis. Dr. CARTER of Des Moines, Iowa, said it was a frightful fact that dairies are, as a rule, filthy, that the cows are filthy and kept in filthy places and milked by men who are both filthy and diseased. He had employed a man who had been previously employed for two years and when he saw that he did not wash his hands nor the cow's udder and remonstrated with him, he declared that he had never done so; and a second milker, who had also been working a year in a dairy, made the same admission. He was opposed to muzzling dogs and thought a shot-gun was a better protection against rabies. Dr. HOLTON of Brattleboro, Vt., agreed with Dr. HIBBERD and said he had tried to find an undoubted case where tuberculosis had been communicated by the milk or flesh of the bovine race and had not found one. He believed heredity, etc., accounted for the development of certain diseases. He had for a year and a half, without knowing it, drank milk from a tuberculous cow, subsequently discovered to be the worst in the herd. He called attention to the danger from substituting patented food for milk.

Dr. KINYOUN and Dr. SALMON controverted the statements of Drs. HIBBERD and HOLTON that the infection of human beings by diseased animals had not been established. When we consider that tuberculosis may be produced in animals by feeding them upon tuberculous tissues and find children die from tuberculous disease and know that the tubercle bacillus does penetrate the intestine, we are justified in inferring this as the source of their disease. As to making children strong rather than destroy disease germs, it is the fact that the robust often die and the sickly do not. Immunity does not depend on the strength of the individual. We do not know how frequent this infection was twenty-five years ago, and we would not know to-day but for the tests that have been established. How does Dr. HOLTON know that the milk he drank was infected?

The next paper, "Contributions to the Study of the Pathogeny, Etiology and Prophylaxis of Typhus," by Dr. FRANCISCO DE P. BERNALDEZ, delegate from the State of Oaxaca, Mexico, was a very able presentation of the subject based on personal observations in many epidemics, and Dr. Bernaldez's conclusions as to the limited contagiousness of this disease were accepted without discussion.

The "Report of the Committee on Nomenclature and Forms of Statistics," by Dr. SAMUEL W. ABBOTT of Wakefield, Mass., Secretary of the State Board of Health of Massachusetts, Chairman, was read by Dr. Walter Suiter of New York, particularized the latest changes in nomenclature by the College of Physicians of London, and was supplemented by a paper "On the Nomenclature of Diseases and Forms of Statistics," by Dr. EDUARD LICÉAGA of the City of Mexico, President of the Association, and one "On Need of Uniformity in the Meaning of the term Stillborn," by Dr. JESUS E. MONJARÁS of the City of San Luis Potosi, Mexico, Director of Hygiene of the State of San Luis Potosi.

Dr. LINDSLEY of New Haven, Conn., expressed his appreciation of the great importance of this series of papers. There were a number of States which do not yet take sufficient interest in vital statistics, and as uniformity in nomenclature is the essential basis of an exact system of statistics, he hoped the Committee would be continued.

The paper "On Dengue," by Dr. HENRY D. HORLBECK of Charleston, S. C., Health Officer of Charleston, was an interesting account of the great epidemic of that disease at Charleston.

A paper "On Municipal Responsibility for Healthy Schoolhouses," by Mrs. ELLEN H. RICHARDS, of the Institute of Technology, Boston, Mass., was read by Dr. Durgin, Health Officer of Boston, and one "On Woman in Preventive Medicine," by Mrs. HARIETTA M. PLUNKETT, President of House of Mercy Hospital, Pittsfield, Mass., was read by title.

EVENING SESSION.

The evening session, to which the public was especially invited, was promptly called to order at 8 P. M. by the First Vice-President, Lieutenant Colonel ALFRED A. WOODHULL, of the Medical Department of the United States Army, who most efficiently assisted President Liceaga throughout the entire meeting of the Association. The session was opened with an address by His Honor EDGAR B. JEWETT, Mayor of the city of Buffalo, who very gracefully welcomed the Association to Buffalo, and invited the members to inspect the administration of the city's affairs in their bearing upon the public health. Mayor Jewett was followed by the Reverend Dr. THOMAS R. SLICER. He said in part: "I address you to-night simply as a citizen of the city of the lowest death rate in the United States, who is interested in conserving the public health of that city to a still greater extent. The word city is the watchword at once of your opportunity and your peril. You all have seen the dwellers in the country violating all of the rules of health and seemingly being themselves healthier than those who live in cities. In the grouping of so many together there is a sense of power that is not found in the country. It is because of this sense of power that lies in the binding of lives together that we at once should have a sense of insecurity and a hope of power. But, more than this, there is that civic consciousness which belongs to every city. Buffalo, as an example, has no civic consciousness. It has not the civic consciousness which marks Birmingham, Glasgow or even Chicago. It is, so far as we have gone, a group of contiguous tribes. I do not now refer to their nationality, though that is also true, but to their diverse interests, to their alien training, to their want of common purposes in this city. Chicago would not be where it is to-day were it not for its civic consciousness, and if it had not had the opportunity of the Columbian Exposition. Until civic consciousness arrives in municipal life it is almost a continuous upgrade for the guardians of the public health. There is a constant warfare with ignorance and avarice. Some of us do not know enough to protect ourselves against contagion. Let me add in conclusion that the Health Department of any city has no business at that trough from which the politician feeds. How many of you have not come in contact with that parsimony that will deny $1,000 for a bacteriologist and spends $2,000 on a junketing trip for a Board of Aldermen?"

The program had provided for an address on the part of the members from the Dominion of Canada, by the Honorable RICHARD HARCOURT, Provincial Treasurer of Ontario and Minister of Health, but having been unavoidably detained, Dr. PETER H. BRYCE of Toronto, Secretary of the Provincial Board of Health of Ontario, acceptably supplied his place in a brief extemporaneous address.

This was followed by the annual address of the President of the American Public Health Association, Dr. EDUARDO LICEAGA, of the City of Mexico, President of the Superior Board of Health of the Republic of Mexico. The President's address from the standpoint of a sanitarian in a body of advanced and experienced sanitarians, was an able and forceful paper. It was written in English by the President, but was read at his request by his friend, Medical Director ALBERT L. GIHON, U. S. Navy, a former president of the Association. It related principally to the business of the Association and went into a history of the growth and development of the study of public hygiene in Mexico, which Dr. Licéaga said had been fostered and encouraged under the administration of President Diaz during the last twenty years. Some of the suggestions made by Dr. Licéaga were of great value and interest. He laid before the Association the proposition that it should devote special attention to the study of contagious diseases, with a

view not only to their cure and the prevention of epidemics, but to the means of preventing the development of individual cases. The several phases of the subject of epidemics were taken up separately and treated in an exhaustive manner. One proposition put forth by Dr. Licéaga was that isolation in infectious diseases is not so essential in some diseases as in others, and that the study of the extent to which it should be practiced would repay investigation. Another proposition was that more attention should be paid to the study of the technique of disinfection. These and many other phases of the broad subject of contagion could be studied by uniform methods over a vast extent of territory by the members of the Association, with great results. Another question which Dr. Licéaga thinks merits investigation is the ascertainment of the period within which any disease is contagious and the person affected dangerous to his neighbors. This is something in regard to which much uncertainty still exists, and definite knowledge in this regard would be of incalculable value. Dr. Licéaga recommends also that a special committee for the investigation of the subject of the prevention of disease, particularly by vaccination and inoculation, should be appointed, and made reference to the newly developed sero-therapy, which he declared was already falling into disrepute through the use of imperfect or contaminated serum. A committee to devise a means for the use and sale of only absolutely pure and perfect serum, should be appointed. In conclusion Dr. Licéaga said: "Gentlemen of the American Public Health Association, I beg to offer you my sincere congratulations on our coming again together in the twenty-fourth meeting of this Association, and on having selected for the place of our meeting this beautiful and interesting city, which is so splendidly placed at the Eastern end of this delicious lake, a lake that supplies the water for this powerful river that farther on precipitates itself into a grand cataract, a stupendous marvel of nature that thousands of pilgrims from all parts of the world come to contemplate and admire; in this city which offers to us its hospitality and affords us an opportunity of again meeting to render our homage to science and to work together for the physical well-being of our fellow-creatures."

*(To be continued.)*

## Mississippi Valley Medical Association.

*Twenty-second Annual Meeting, held at St. Paul, Minn., Sept. 15-18, 1896.*

The meeting opened with a very satisfactory attendance, Dr. H. O. WALKER, of Detroit, presiding.

Dr. CHARLES A. WHEATON, of St. Paul, Chairman of the Committee of Arrangements, called the meeting to order, and introduced Archbishop IRELAND, who delivered the invocation.

Governor CLOUGH of Minnesota delivered the address of welcome on behalf of the State. He said he was obliged to admit that he was no orator, and that he had always been more or less timid in the presence of a physician, but of his hearty welcome to the State all members of the Mississippi Valley Medical Association might be assured.

Hon. F. B. DORAN, Mayor of St. Paul, delivered an eloquent address of welcome on behalf of the city. He referred to the reputation of St. Paul for hospitality won by the recent encampment of the G. A. R., and he said that upon that occasion the city had welcomed the men who had preserved the nation, while now she welcomed the men who preserved the bodies of the nation's defenders.

Dr. A. J. STONE delivered the address of welcome on the part of the profession. He paid a glowing tribute to the profession of St. Paul, the absence of professional jealousy, disagreement and ill-feeling, while he begged to assure the visiting profession that they were most heartily welcome. He also took occasion to speak of the great help the ladies of St. Paul had been to the committee in making the arrangements. In speaking of Minnesota as a health resort, he said it had proved a Mecca for consumptives, and notwithstanding the fact that many cases of tuberculosis came to St. Paul when in the last stage and when beyond all hope, die there, are included in the mortality, and notwithstanding this fact the mortality of this city is the lowest of any in the world.

Dr. H. O. WALKER took the chair and thanked the speakers for the welcome they had extended. In casting about for a subject upon which to deliver the annual address, he had decided to relate some experiences he had had rather than thresh over the various subjects which are dealt with at length in the various medical journals. He took for his title "Some Experience of Surgery of the Kidney." (To be published in full in the JOURNAL.)

The report of the Treasurer was not read, by reason of Dr. H. N. Moyer's absence on account of sickness.

The program opened in the afternoon session with a paper by Dr. TRUMAN W. BROPHY, of Chicago, who presented a

### NEW OPERATION FOR CLEFT PALATE.

He took the ground that the operation should be performed much earlier than had been done heretofore by surgeons, and that the idea that the operation should be postponed until the child reached the age of three to seven years was an erroneous one for the reason that the changes in the voice would by that time have become permanent and the correction becomes almost an impossibility. The operation suggested by the author was the cutting of the edges of the cleft and then suturing them by wire sutures secured through a lead plate on each side of the palate, and made to conform to the same. In the hands of the author the operation had been uniformly successful.

Dr. W. H. DALY, Pittsburg, in discussion said: I think the essayist has made a marked advance in the operation for cleft palate, the most important point being its adaptability to very young children, as I think it does away with all former objections to operating on the young infant. The greatest disappointment I have had in these cases is the poor articulation which follows the operation, and which is always a source of great disappointment to the patient and family, who always expect to hear perfect speech immediately after an operation, and I think this result will be attained in Dr. Brophy's operation.

Dr. G. FÜTTERER, of Chicago, read a paper entitled

### PLEURITIC EFFUSIONS AND THEIR TREATMENT.

The author took the ground that a bacteriologic examination should be made in all cases. The diathesis in cases of pleurisy should also be most carefully looked into, as cases of uric acid are frequently found in connection with pleurisy; these yield readily to the administration of salicylates, and but about 15 per cent. of the cases of pleurisy are believed to be pneumatic. The pleurisy of typhoid fever was also considered by the author, who did not believe it was a mixed infection, but that it was a distinct condition. As to the presence of tubercle bacilli in pleuritic effusions, Dr. Fütterer believed that they may enter through the alveolar septa and enter the pleura without producing serious effect in the lungs. The author has washed out the cavity in fourteen cases with an antiseptic solution, with success in twelve. The agar culture should be used to differentiate between tuberculosis and pleurisy. The advantages to be gained by this treatment is that many patients will submit to it when they will not submit to the excision of a rib.

Dr. GUSTAVUS M. BLECH of Detroit, read a paper on the

### TREATMENT OF INFLAMMATORY DISEASE OF THE STOMACH.

The author criticised the old routine methods of treating acute inflammatory disease of the stomach with menthol, ice, cocain, opium, purgations, cathartics, pepsin, etc., for the reason that they did not cure the patient and the physician was too liable to delude himself into the belief that he had cured his patient because he did not return, which the author claimed was in nearly every instance due to the fact that the treatment did him no good. The reason that was given for the failure to cure the catarrhal condition of the stomach was that we are too prone to attempt to prescribe remedies for the relief of symptoms only and not sufficient attention being given to relieving the pathologic condition which prevent the digestive process from being normal. The use of strong antiseptics, which seem to be indicated, are more likely to do more harm than good by reason of the destructive action of strong antiseptics have on animal and vegetable cells. The treatment may be summarized into:

1, destroy the morbid element which is present in the stomach so as to thoroughly cleanse the mucous membrane; 2, heal the diseased surface after it has been made aseptic. For the cleansing the author has found hydrozone the most satisfactory. He uses a tumblerful of lukewarm water containing a 2 per cent. of hydrozone, half an hour before meals. The nascent oxygen which is set free in the stomach by the oxidizing agent destroys the morbid element and cleanses the mucous membrane. As a healing agent glycozone in one to two dram doses immediately after meals, is recommended. This treatment is strongly urged in gastric ulcer.

Dr. F. HUNT STUCKY, Louisville, Ky.—I desire to emphasize the value of perfect lavage in cases of gastritis. I would also urge the careful attention to dietetics as well as any intestinal disorder that may exist in connection with the gastritis. There must also be something in addition to the antisepsis; the nervous system should be built up and attention paid to any cir-

culatory disturbance. I believe massage would be valuable in many of these cases.

Dr. I. N. Love, St. Louis—I do not believe in limiting the treatment to any one agent, the entire tract must always be kept in mind and the application or administration is but one of many things to be done. We can not separate one set of secretory glands from another but must give attention to them all and in these cases I believe especial attention should be paid to diaphoresis; massage is also to be recommended in a certain proportion of cases. I believe there are many persons suffering to-day from an auto-toxemia due to a disordered stomach and that 90 per cent. of these cases can be laid at the door of constipation. Lavage of plain water as well as drinking large quantities of water just before eating I think a great help toward starting the current downward and outward. The habits of lavage has done much harm and I do not believe it should be intrusted to the patient to carry out.

Dr. W. H. Daly, Pittsburg—I have had anything but satisfactory results from lavage, the treatment suggested, and do not favor it. I heartily agree with the speaker regarding the toxemia for I heartily believe that a very large proportion of these stomachic diseases are due to toxemia and the most important thing to do is to consider every one of these cases as a rule unto itself and treat them individually. A good idea is to give a lavage of a gallon of water and then empty the stomach by irritating the throat with the finger when a cleansing result is desired.

Dr. C. H. Hughes, St. Louis—The most important factor in the handling of this class of cases is to treat your patient all over. Medical men of the present day in treating dyspepsia have been forced to the conclusion that the individual is possessed of a pneumo-gastric nerve and that it plays a most important part in this disease, which has so long been considered as a local one. You take for example a case of nasal catarrh which goes the round of treatment at the hands of the rhinologists, who apply the spray, cautery, remove spurs from the septum, etc., and what is the result? Are the cases cured? No; because the attendant is too prone to treat the disease as a purely local one and not through the nervous system as should be done.

Dr. F. F. Lawrence, Columbus—The frequent occurrence of dyspepsia in connection with gallstones has suggested the possibility of its being secondary to this condition. We have all known of cases when the patient has consulted the physician for the relief of the usual train of symptoms which would indicate gastro-intestinal disorders and without relief until an abdominal surgeon, looking for ovaries he may remove, opens the abdomen and finds gallstones, after the removal of which the gastro-intestinal symptoms disappear.

Dr. J. M. Mathews, Louisville—I would like to suggest that the author of the paper did not attempt to treat nasal catarrh, hysteria, or some of the other diseases the gentlemen have referred to. The paper dealt with a certain class of gastric disease and the treatment is precisely what you would adopt should you have an ulcer or acute inflammation located in any other region and I think we should bear in mind that if we want to have successful results we must get at the local conditions in these cases.

Dr. H. T. Patrick, Chicago—I think there is some value in the suggestion of the esssayist but I am opposed to the presentation of a cure for a condition as complex in its nature as gastritis without stating more specifically what form it is. I think the important thing to do first is to decide upon what particular form of the disease we have to deal with, then the cause and we can then apply our cleansing and antiseptic treatment.

Dr. I. A. Abt, St. Louis—We should not for a moment lose sight of the fact that we have a pathology for all these forms of gastritis, whether it be from alcohol, tobacco or any other cause. In making this differential diagnosis lavage will be of particular value. I am firmly of the belief that many of these cases are due to toxins.

Dr. J. A. Larrabee, Louisville—I am convinced that the portal circulation is more often at fault in these cases than is generally supposed and its correction too often neglected. Exercise is above all things the most important and should be insisted upon in order to direct the blood to other and healthier channels. While I do not propose to discard the use of antiseptics I will place more reliance on treating the portal circulation.

Dr. W. S. Caldwell, Freeport, Ohio—I use the stomach tube for diagnosis purposes principally and when I find that there is neither fluid or debris forming in the stomach I keep the tube out, although where I find much fluid accumulated in the stomach in the morning I wash it out with the tube.

Dr. Paul Paquin, of St. Louis, read a paper entitled:

THE TREATMENT OF EXPERIMENTAL TUBERCULOSIS IN ANIMALS BY THE USE OF BLOOD SERUM.

(It will be published in full in the Journal.)

Dr. H. Longstreet Taylor, St. Paul—I desire to say just one word on tuberclin and its modifications. Although the essayist says that it acts by producing an antitoxin, yet this has not and can not be proved. It may be the true explanation although the observed fact of an active leucocytosis in tubercular areas during its use is a more plausible explanation. Tuberculosis in its various manifestations presents such a complicated future and such a complex one that the very existence of an antitoxin is problematic and even if found it could not be a specific in the sense that the antitoxins of the acute diseases, as diphtheria, are specifics. Tuberculin is very much in disrepute here and everywhere, but it has a few constant friends yet, among whom I stand, and with good reason, for in careful hands undoubted results are obtained with it. I have, for instance, only recently seen the glands, in three cases of undoubted glandular tuberculosis, disappear under its use; what more convincing experiment could one desire?

In a long series of cases my results with tuberculin have been eminently satisfactory. With the St. Louis serum, however, I have not been able to obtain results. All the cases upon which I have used it grew worse. Still from a short series no results can properly be claimed, for more than in any other disease probably are statistics difficult of comparison in tuberculosis.

Dr. Jos. Muir, New York—My experience has been large and varied in the therapeusis of tuberculous disease and for years I have used tuberculin and all its modifications, especially those of Hunter, Maclean, Klebs, Kitasato; aside from these, modifications of my own consisting of different percentages of toxic albumoses, the logic being that the maximum of irritation was gradually reached within and around that impenetrable wall, which surrounds all anatomic tubercles. Dr. Paquin is scarcely satisfactory in his theories regarding the physiologic action of his serum in tuberculous areas but his paper is teeming with statistics; some one has said, Beaconsfield I believe, that statistics consist of three classes, lies, damn lies and statistics. The curability of consumption can not be judged by statistics. Its curability has been known from time immemorial since the days of the early Greeks. Milk was the great agent in the treatment and continues to be so to the present time—so from the fullness of statistics I may cite the case of Professor Emmerick in an article written by him somewhat over a year ago and in which he gave the history of ten cases of sarcoma and carcinoma cured by serum obtained of the erysipelas and prodigiosus toxins. It was afterward proven that one of the cases referred to had been dead two months prior to the reading of the report.

Dr. Barclay, Pittsburg, Pa., complimented Dr. Paquin and congratulated the profession on the earnest and honest investigations made. He felt that the absolute candor of the reports should command the attention of the profession.

Dr. H. W. Loeb, St. Louis, Mo.—I have known several cases of laryngeal tuberculosis treated with serum and knew of one case in which Paquin's serum had given remarkably good results. In others it had been less successful. I consider serotherapy more promising in the treatment of other forms of tuberculosis than that of the throat. I will report a case of a man who, six years ago was examined by six competent physicians who pronounced the case one of tuberculosis with a fatal prognosis. The serum was used and to-day the man feels perfectly well and all physical signs of the disease have disappeared except a slight thickening of the arytenoids. I have confidence in the treatments in laryngeal tuberculosis, and one fact I have noted is that when first administered the larynx improves wonderfully even though it again resume its downward course.

Dr. W. H. Daly, Pittsburg—There is one thing to be remembered in our enthusiasm over any new remedy for tuberculosis and that is a very frequent occurrence to have patients claim that they are much better whenever a new line of treatment is adopted. It was so with Koch, Bergeon and Edson. I have tried the latter for a period of three months only to abandon it and while using it among some 150 cases of complications I had developed four marked cases of acute insanity. I regret that I am forced to admit that I feel that medical science has done very little toward checking the downward career or in the diagnosis of this disease.

Dr. A. J. Green, St. Paul—The full ability of medicine is best demonstrated in the treatment of tuberculosis. The statistics of some of the newer remedies are very encouraging at first, but they are somewhat altered when we stop to consider how many cases of enlarged glands and tubercular laryngitis get well without any treatment. I am still inclined to the

belief that we must depend more upon climate and high altitude than any thing else.

Dr. JOSEPH MUIR, New York—The treatment of tuberculosis is a very vague thing. We should be somewhat guarded in pronouncing a cure for the reason that many cases for a time manifest a quiescent stage which simulates cure. As for the beneficial results of climate, I think more is due to the change of surroundings than to the climate.

Dr. CHAS. H. HUGHES, St. Louis, said that one should not depend on any one remedy in the treatment of consumption.

Dr. LOVE said he knew of the work and results of Dr. Paquin in his laboratory, and knew that his results in the treatment of tuberculosis were as stated.

Dr. PAQUIN, in his closing remarks, stated that serotherapy was founded on natural law. It was nature's own remedy he tried to produce when he prepared tubercle antitoxin. He believed that serotherapy in tubercle had passed the experimental stage, although by no means perfect. He said that in the earlier stages pulmonary tuberculosis could be arrested in at least 80 per cent. of the cases by the use of serum and proper adjunct treatments.

SECOND DAY.

Dr. HORACE H. GRANT, of Louisville, Ky., delivered the address on surgery:

THE RELATIONSHIP OF DIAGNOSIS TO THE FUTURE SURGICAL PROGRESS.

He said that we must find some common ground for the settlement of our differences; many of the recent operations are passing away, owing to the effect of our modern scrutinizing investigation. We forget there are men in the quiet of their laboratories doing a work which makes all our wonderful progress possible. We can not progress much further in technique of operative skill. Any great amount of paraphernalia suggests a lack of personal resource in the operator. Almost every part and organ of the human body has been removed recently with more or less good to the patient. If we would make earlier and more careful diagnosis many of the possible failures would be precluded. No surgeon dare say to the patient, "If I had known yesterday, or before, so and so, the result would have been different." Rarely will we fail to secure an operation if the operator be sure of his diagnosis and demands an operation. No term in all surgery is so often misapplied as conservatism. No aim is dearer to the surgeon than the ways and means of relieving his patient. We must not fall into the error of making one man great and another man insignificant. Experience is and should be one of the greatest aids in diagnosis. The skiagraph has lately come into importance in surgical work, and may be made a valuable adjunct in many instances. Its recent successes are noteworthy. It is yet, however, in its infancy, and is doubtless capable of still more development. No one doorway can open to success in surgery. The skillful and intelligent application of prompt relief added to a careful diagnosis will give us the most wonderful and satisfactory results. What each one finds to do let him do it with his might.

Dr. E. M. HOUGHTON demonstrated the action of the antitoxin on guinea pigs before the Association. He called attention to the conservative view the profession had taken of the antitoxins which would have a tendency to avoid the unfortunate experience the profession had had with tuberculin. The value of laboratory experiments in connection with clinic observation was emphasized by reason of our being thus enabled to obtain the exact dynamics of the flesh and blood of our patients and the advantage to be gained in varying our experiments at will. In the case of diphtheria antitoxin the physiologic effect can be foretold with almost the same certainty that we can predict the formation of hydrogen when platinized zinc and hydrochloric acid are brought together. The world's verdict in reference to the clinic value of the diphtheria antitoxin is expressed in the report of 615 physicians reporting to the American Pediatric Society on the use of the serum, of whom 600 are in favor of its use. A similar commission appointed by the German government, came to a like conclusion, while Behring claims that after a careful estimate he thinks that 20,000 lives were saved in Germany alone by the use of the heil-serum. In England the results are expressed in the report of the *Lancet* Special Commission, which report: That the influence exerted by the exhibition of antitoxin on diphtheria is at any rate quite as marked as that exerted by quinin in malaria. Our ignorance of the true action and power of the toxins and antitoxins was emphasized. The author claimed that the results obtained by Pfeiffer and his co-workers, in which he showed that if the serum obtained from the blood of an immune animal be injected into an animal infected with virulent cholera cultures the animal survives while the control animals die. This result is not due to the antitoxic action of the serum but to the bactericidal substances developed when the serum is brought in contact with the living cells of the animal body. If an animal be treated with large and increasing quantities of living cultures of the bacillus pyocyaneus for several months, the resulting serum will possess strong bactericidal properties but weak antitoxic properties. If on the other hand the toxin is used, the resulting antitoxin will have a strong germicidal and antitoxic action. This may explain why we get a more potent diphtheria antitoxin when the horse has been immunized with a diphtheria toxin than when he has been immunized.

Eight guinea pigs were inoculated before the Association with diphtheritic toxin, five were then inoculated with the antitoxin and the second day saw the five in excellent condition while the other three died.

The Committee on Nominations, consisting of Dr. J. M. Mathews, Louisville, Dr. I. N. Love, St. Louis, X. C. Scott, Cleveland, W. N. Wishard, Indianapolis, J. M. Coulter, Chicago, W. F. Barclay, Pittsburg, W. J. Mayo, Rochester, Minn., J. P. Collins, Hot Springs, G. Blech, Detroit, T. H. Manley, New York, and E. W. Lee, Omaha, reconsidered the nomination of secretary, and selected Dr. H. W. Loeb.

Dr. ROBERT H. BABCOCK, Chicago, read a paper on:

A REPORT ILLUSTRATING THE VALUE OF SECONDARY PHYSICAL SIGNS IN THE DIAGNOSIS OF CARDIAC DISEASE.

The author claimed that the murmurs are the least reliable signs of valvular disease and an accurate diagnosis can not be made unless the secondary signs are recognized. If the heart be too weak it may be that the murmur can not be detected, or a grave defect may not be noted. Secondary symptoms are a modified pulse rate, character and rhythm, leading to a congestion of the veins and internal organs. In some instances there is systolic venous pulsations of the liver. This is diagnostic of insufficiency even if the murmur is not audible.

Dr. JOSEPH MUIR, of New York, read a paper on

REINFECTION IN CONSUMPTION.

(It will be published in the JOURNAL.)

Dr. J. A. LARRABEE, Louisville—The paper of Dr. Muir is unusually attractive, and reflects to us our individual experience with consumption. The doctrine of re-infection affords the only reasonable explanation of the recurrence of arrested tuberculosis, with which every general practitioner must be familiar. The principle element in our failure to secure to the patient the advantage gained by our treatment in cases of pulmonary consumption consists in our inability to remove the patient from the surroundings in which his disease commenced. The air of workshops, the carpets and drapery of the apartments, together with the illy ventilated tenements of even the well-to-do working people, contain abundant seed for the now more congenial soil. I have always believed that if the consumptive could have in the inception of his disease the comforts and care which are drawn around him in the late stages recoveries would be far more frequent. In regard to climate, I do not think that altitude or latitude are of so much importance as a sterile atmosphere to the bacilli tuberculosis. Some of the saddest sights which I have witnessed in my travels both at home and abroad have been doctors' mistakes coming home in pine boxes. I believe that the best place for a consumptive in the second stage of his disease, when the lung tissue is beginning to break down, is at home, no matter what or where that home may be. It is a sad sight to see the suffering putting up with inconveniences and deprivations, which home alone can remove, for the questionable advantage of climate. To this must be added the mental depression consequent upon absent friends and the tender touch of a loving hand. Yesterday I had something to say upon lavage when the subject of gastritis was under discussion. To-day I simply want to change the "l" into a "g" and speak of gavage, by which I mean a systematic course of forced feeding with most nutritious food, or in a word, forced nutrition. It has been sufficiently demonstrated that nutrition may be successfully forced even where there is no inclination to eat. Every farmer who has stuffed turkeys in a dark cellar for thanksgiving market knows this. If you can make your consumptive patient gain steadily in weight he will as certainly improve in all other respects. I have sent very many consumptives to New Mexico with invariably good results, but I believe that if the United States government, as proposed, were to build a sanitarium at Las Animas or Santa Fe and fill it with consumptives, it would soon become a Lazar house of disease, notwithstanding the altitude and latitude. Among many of my cases sent to this place was a young man who was fast succumbing to consumption. He was a blythe and accomplished fellow, and the sole support of a widowed mother. He had night sweats and copi-

ous expectoration and plenty of bacilli. I sent him to Las Animas to "fence ride," herding on a ranch; he rapidly improved. His clerical abilities attracted the attention of his employer, who had built a hotel, and he assumed the duties of clerk. In three weeks his symptoms returned; he wrote me and I told him to get out and go "fence riding"; he is still well, but would have died had he remained indoors. No point is better established than that consumption is a disease of aggregation of individuals. It was unknown to the nomadic tribes, and no point is more important than segregation of tuberculous subjects. If I have spoken at greater length than the limit my apology is that such a paper as Dr. Muir has presented should not ge unnoticed, and without the compliment which it deserves.

Dr. HUGH T. PATRICK of Chicago, read a paper with elaborate illustrations on

TRUNK ANESTHESIA IN LOCOMOTOR ATAXIA.

In nearly all cases of tabes dorsalis there is a band of anesthesia about the trunk of about the level of the nipple. It is early in the disease very narrow or even incomplete, or may be represented by a zone in which the localization of touch is not normally accurate. The sensory blunting on the legs so frequent in tabes is generally an analgesia; the trunk anesthesia is ascending, tactile, and the pain sense may be quite normal. The band of anesthesia does not correspond to the cutaneous distribution of the intercostal nerves, but to the nerve fibers arising from adjoining segments of the spinal cord. In some cases there are two distinct zones of anesthesia indicating simultaneous involvement of spinal segments at some distance from each other. The borders are inconstant, ordinarily retract on continued testing, and vary in position with the method of examination. The same band of anesthesia may occur in syphilitic pseudo-tabes as shown by an illustrative case, as far as known the only one on record. The patient presented nearly all the principal symptoms of locomotor ataxia, including a wide band of trunk anesthesia, but a diagnosis of syphilis of the cord was made, and on active specific treatment he made an almost perfect recovery. A zone of anesthesia much narrower than this one still exists.

Dr. J. FRANK of Chicago, presented a paper on "A New Method of Fastening the Round Ligament in Alexander's Operation."

Dr. J. A. ABT of Chicago, read on "The Clinic Significance of the Child's Fontanelle."

Dr. W. J. Mayo of Rochester, Minn., read on "The Surgical Treatment of Pyloric Obstructions."

Dr. THOS. H. MANLEY of New York read a paper on

CONDITIONS WHICH MAY SIMULATE ORGANIC OBSTRUCTION OF THE RECTUM.

The obstructions in the large intestine are of two kinds, viz.: 1, the passive; 2, the chronic or incomplete. The former are the most rare and dangerous, with few exceptions depending on hernia, paresis, or occlusion by a new growth. The latter derange the general health though they seldom immediately imperil life. They are essentially dependent on habit, occupation or senile changes, or occur secondarily in consequence of extrinsic influences. They are more common in the female sex in consequence of difference in the anatomy and functions of neighboring organs; and may give rise to such symptoms as may lead the unwary into suspecting uterine disorders.

By a methodic systematic examination of cases of intestinal obstruction we may generally be enabled to determine whether the large or small intestine is the seat of stenosis or occlusion by certain well defined symptoms and when the large intestine is the seat of the trouble, we may determine not only the area involved but likewise whether such obstruction proceeds from causes of an intrinsic origin or from pressure conveyed through the other sources.

Dr. I. N. LOVE, St. Louis—The paper of the essayist is a most practical one on obstruction in the rectum, which is a most serious condition. It is serious if present in the male and doubly serious if present in a woman. There can be no question on the part of those who have been engaged in the practice of medicine for any length of time that 90 per cent. of the diseases of women are dependent on constipation. These patients suffer not only from general poisoning from accumulated ptomains and auto-infection, as it were, but in addition there are encroachments and misplacements of the bowels, on the pelvic organs depending upon the regular accumulation of the fecal matter which produces mechanical obstruction. The average woman, be she mother or daughter, has not been sufficiently impressed of the danger of constipation. We all know that the old saying, the standard of comparison as it were, regarding constipation which was explained in the words "as constipated as a school marm or an owl," was correct. We have all met with women young and old, moving in respectable society, whose bowels have not moved for ten days, two or even three weeks, yet these people are surprised if dangerous diseases overcome them. Fatal inflammation of the peritoneum and many other similar diseases in women are superinduced by constipation. We should impress women young and old that it is not only unesthetic and unartistic, but not healthful for their bowels not to move every day. Let us impress them of the fact that to overcome this condition cathartics and purgatives are objectionable; they will have removed the immediate disturbances but they produce weakness and are agents in the establishment of the constipation habit. Proper diet and eating of large quantities of fruit, together with an abundance of pure water, and especially exercise, will in nearly every case relieve the trouble. Let me emphasize the importance of the use of a great volume of water morning, noon and night; let us teach our patients not to drink water because they are thirsty, but for the purpose of washing out their alimentary system of sewerage. The fact that the essayist has cited a case where he with difficulty removed a fecal mass with the obstetric forceps from the rectum must be accepted by us. We have all had experience along that line calling for the scooping out of accumulated masses menacing the health of the individual. Women are very lax of exercise, an every day necessity: let us teach them that a proper open condition of the rectal canal is necessary to cleanliness, to the system, and cleanliness is next to godliness.

Dr. N. H. PIERCE of Chicago, presented a new "Submucous Linear Cauterization; a New Method for the Reduction of Hypertrophies of the Conchæ."

Dr. HUGH T. PATRICK of Chicago, read a paper on

ELECTRO-THERAPEUTICS AND ELECTRO-DIAGNOSIS SIMPLIFIED.

Electro-diagnosis is limited to the affirmation or denial of a lesion of the lowest neuron, that is, of a lesion of the motor cells in the spinal cord or of the nerve fibers, the peripheral nerves springing from these cells. A lesion of this neuron causes reaction of degeneration and this stripped of all unnecessary technicalities may be recognized by two variations from the normal, namely: A loss or very considerable diminution of faradic contraction and the slow worm-like contraction of the muscles to interruptions of the galvanic current. In the electro-therapeutics of organic disease of the nervous system applications of electricity to the brain may be entirely discarded as useless. Electricity through the spinal cord is little better. In diseases of the peripheral nerve it probably hastens recovery and that current is to be chosen which the better causes muscular contractions. In functional nervous disease electricity is of more practical value than in organic affections, but it is almost impossible to determine what proportion of this good effect is due to mental impression and suggestion. The galvanic current is to be chosen for facial and intercostal neuralgia, and sciatica; the faradic for lumbago, for hysteric and anesthesic paralysis and pain. The galvanic for exophthalmic goitre and sometimes for neurasthenic headache and backache. For facial spasm, tic douloureux, spasmodic torticollis, tremor and chorea, electricity is useless aside from the mental effect.

Dr. J. A. LARRABEE, Louisville—I arise, Mr. President, to tender my personal thanks to Dr. Patrick for his plain, succinct and truthful elucidation of the application to bodies of which we know little, of a subtle fluid of which we know less. I thank him because he has made the subject of electro-diagnosis and therapeutics plain to my mind, which is a difficult task. Hitherto papers presented upon this subject have been chiefly interesting to their authors. Dr. Patrick has plainly shown us what lines are to be expected from electricity. It is not surprising that electro-therapeutics should afford a fruitful field for quackery and then it should be surrounded with all the mysteries of his ingenuity. I will say in conclusion that I have not found any benefit from electricity in chorea, nor should I expect that any benefit should accrue if the accepted pathology of that disease obtains.

Dr. A. J. OCHSNER of Chicago, in a paper on

NERVE SUTURES AND OTHER OPERATIONS FOR INJURIES TO THE NERVES OF THE UPPER EXTREMITY.

It presented the following conclusions:

1. Suture every severed nerve. 2. The earlier the operation the better. 3. If neither sensation or motion is established within a year, the nerve should be again exposed, the cicatricial tissue removed and the ends again sutured. 4. The ends should be clean cut, should contain neither crushed tissue nor cicatricial tissue. 5. Tension must be avoided. 6. The wound must heal without suppuration to secure the best results. 7. Hemorrhage should be controlled perfectly to prevent intervening clot. 8. Carefully prepared catgut is the best suture material. 9. After suturing the ends either direct or "a distance" it is

well to stitch a fold of fascia over the united nerve ends. 10. The extremity should be placed at rest. 11. The external incision should be ample.

Dr. H. P. NEWMAN of Chicago read a paper on

WOMAN AND HER DISEASES VERSUS GYNECOLOGY.

The author emphasized the following points: 1. As specialists we must recognize and exercise the rising interest in a medical science which shall be preventive rather than curative. 2. Our affiliation should be with the general practitioner and obstetrician rather than with the specialist in surgery, who often lacks the special training necessary to an appreciation of the many disease manifestations in woman, their etiology and prophylaxis. 3. As we have long made a study of the pathology and etiology of woman's diseases and as we know that whatever may be acquired can be prevented, our specialists are best qualified to lead in the movement for the reform of all conditions detrimental to the health of modern women.

Dr. J. H. COULTER of Chicago read a paper on

TONSILLOTOMY BY CAUTERY.

He gave the following conclusions: 1. Do only a small amount at each heating of the electrode—work five seconds and allow the patient to rest twenty seconds. 2. Burn only where you can see what you are doing. 3. Use an electrode bent at right angles and having a fine point. 4. Do not attempt too much at one sitting. 5. A strong solution of silver nitrate is an excellent hemostatic in cases where there is slight hemorrhage. 6. Be sure the electrode is thoroughly heated when you attempt to burn. 7. Cut off the portion loosened at each séance; it prevents healing by its friction, and is often an annoyance to the patient. 8. Do not operate if the gland be acutely inflamed. 9. Always remember the normal shape of the tonsil, and that one must dissect much more deeply at its superior portion in order to get all of the pathologic tissue. 10. It is sometimes best to cut from below upward while taking out the inferior portion; in this convenience should be the guide. 11. By care the operation may be rendered almost if not entirely bloodless. 12. The indication in all cases is *eventual* total ablation. 13. Succeeding steps on the same tonsil should not be more than ten days apart. 14. When hemorrhage is met with, stop the bleeding at once with the heated electrode, and apply a solution of silver nitrate 90 grains to the ounce solution or stronger. 15. Try the method in suitable cases and I feel confident you will concur with me in the opinion that it possesses some advantages not found in any other.

Dr. G. BLECH of Detroit read a paper on "Kola."

Dr. F. F. LAWRENCE of Columbus, Ohio, read a paper on

THE PATHOLOGY AND TREATMENT OF SUPPURATIVE SALPINGITIS.

He called particular attention to the following points: 1. The tubal mucosa is a true mucous membrane possessed of all the histologic elements of mucous membrane. 2. The fimbriæ are prolongations of the folds of mucous membrane with a few muscular fibers beyond the end of the tube proper. 3. The closure of the fimbriated extremity of the tube is effected by first, the unfolding of these plicæ and the elongation of the muscular fibers with coincident inflammatory exudate and not by adhesion of peritoneal surfaces. 4. The closure of the tubal ostium results in the formation of a circumscribed abscess. 5. The pathology of this circumscribed abscess is the same as that of suppuration with abscess formation in mucous membranes in other parts of the body except in the effect upon important contiguous tissues. 6. Occasionally the uterine end of the tube remains patent when we have the abscess of tube communicating with uterine cavity through which it may impart, discharge its contents. The treatment of the tube can not be fixed by any ironclad rule, each case must be treated as best it can by first, incision and drainage in rare cases; second, the vaginal section in a few carefully selected cases; third, abdominal section in a great majority of cases; hysterectomy in those cases where we find abscess of uterine wall, tubercular deposits, fibroids or malignant disease of fundus; as hysterectomy destroys the pelvic floor, it should never be performed except when there is some tangible lesion of the uterus.

Dr. F. B. TURCK, Chicago—I wish to take objection to the manner in which the speaker handled the bacteriology and pathology, in his paper, of the uterus and tubes. In the first place microörganisms do not peptonize living cells. It is only necrosed tissues that undergo peptonization. The manner in which infection takes place is, first a soil is found upon the surface of the mucosa—the microörganisms may develop in a mucous bed of cellular lining upon the mucous wall. As the germs grow in this rich nutrient media toxins are found which are partly taken up by the underlying gland cells. A necrosis then occurs and the cells exfoliate and add to the nutrient media. It is then that peptonization of the necrosed cells may occur. The thinning of a tube is not due to the peptonization of its wall. When inflammation of the mucous membrane of the tube occurs, the membrane first may be thickened, then fluids are formed which distend the tube or tubes, and the pressure in this manner produces a thinning of the walls.

Dr. H. H. GRANT, Louisville—While I believe the position taken by the essayist is practically the one we must accept, it is not the ideal one. We are often forced to accept what our judgment indicates to be a second choice. There are two arguments not mentioned which, while they are in the minds of the essayist and the surgeon, are not in the minds of the general practitioner and the family, and do not assist in securing consent to operate. These are: First, there exists always, practically, a septic condition and often a gangrenous foreign material of a highly dangerous character. Secondly, there is a large proportion of apparent recovery which are in fact but partial recovery. When we can so instruct the general practitioner that he will understand the patient who lies before him has within his abdomen a virulent foreign body or pus sac, he will not hesitate to consent to and advise operation. Beside this when there is impressed on the patient the danger of recurrence, even after apparent recovery, he will more likely accept the operation. With respect to septic peritonitis a serious question arises. Whether to operate or not is still unsettled. It is humiliating to decline and often hopeless to proceed.

Dr. I. N. LOVE, St. Louis, read a paper entitled "Water." (To be published in full in the JOURNAL.)

DR. T. H. STUCKY, Louisville—I want to say a good word for hydrotherapy, but I would take issue with the essayist that a large quantity of water is always to be taken with meals, for example, in cases of dilated stomach I do not think it at all advisable; it also prevents thorough mastication when taken with food and thereby prevents complete salivation which would result in fermentation. I also think that too little attention is paid to the subject of water in our medical colleges.

Fifty-seven members of the Association left in a special train for Yellowstone Park Friday evening and arrived at the Park Sunday noon. They expect to return in a week.

## Second International Congress of Gynecology and Obstetrics.

This Congress opened at Geneva September 1, with a notable gathering of specialists from every civilized country. The first address was made by Bouilly of Paris, with Kelly of Baltimore and Sänger of Leipsic as "co-rapporteurs," and discussion by Henrotin of Chicago, Péan, Hartmann, Richelot, Tait, Doyen, Delagenière, Laroyenne, Jacobs, Delettrez, Rouffert, Tournay, etc. Bouilly defined as follows the indications for simple incision with drainage, through the abdominal or vaginal wall:

1. An acute pelvic abscess of cellular origin, the point for the incision indicated by the projection of the collection in the abdominal wall or in the vagina. 2. Primary peritoneal collections consecutive to puerperal, abortion or gonorrheal lesions, acute or subacute, or to post-operative peritoneal infection. 3. Suppurated hematoceles. 4. Encysted pelvic abscess in the adnexa, unilateral, with not very thick walls, easily fluctuating, and located low down on the uterus so that it can be pushed down by pressure in the hypogastric region into contact with or near, the wall of the vagina. Simple incision is also especially indicated in acute suppurations of the ovaries or tubes accompanied by general serious conditions in which the extreme virulence of the pus contraindicates laparotomy or hysterectomy. This method of treating pelvic suppurations gives better results and ensures recovery in far more cases than is generally realized, while if a fistula persists or the suppuration returns, it does not preclude a later vaginal hysterectomy.

Laparotomy is indicated whenever there is any doubt as to the character of the lesion or whether it is uni- or bi-lateral. The latter consideration is less important in the case of suppurations, as it rarely happens that suppuration of one side is not followed by the same condition in the other. Laparotomy is also the better method for pockets located high up, when they are near the horns of the uterus and yet far enough away from it and from the vaginal cul-de-sac for the uterus to retain a certain independence and mobility; also when the pockets are rather abdominal than pelvic, not surrounded by thickened and indurated tissues, and when they have not produced repeated pelvi-peritoneal disturbances. The opening of such

a pocket in the course of a vaginal hysterectomy might produce an acute peritoneal infection by infecting the surrounding intestines unprotected by any old barriers of organized adherences. Aside from these two restrictions; uncertainty as to the nature of the lesion and an elevated location, vaginal hysterectomy accomplishes all that can be accomplished by laparotomy in the removal of suppurated tubes and ovaries or a small pyo-salpinx. It also reaches and cures lesions for which laparotomy is useless or too dangerous. It is the only method which reaches purulent collections enclosed in the appendages, circumscribed by adherences or merged in the neighboring parts, and separated from the great peritoneal cavity by solid and organized tracts, actual fibrous processes which render laparotomy useless and any attempt at enucleation dangerous. Hysterectomy is also the preferred method in cases of large, adherent pockets, impossible or difficult to enucleate, with or without fistulas. It is also the best method to cure chronic suppurations of the peri-uterine cellular tissue that have opened spontaneously and formed communications with neighboring organs. In these operations the purpose is simply to evacuate; the ablation of the uterus forming an ideal means of draining, through which the collections discharge and dry up. To extirpate the pocket itself under these circumstances deprives the operation of all the advantages of its simplicity and benignity, and shows a misapprehension of its chief advantages. In conclusion he stated that ablation of the uterus is a factor not to be neglected in the treatment of pelvic suppurations. Some of the laparotomists now remove the uterus along with the adnexa as this ensures perfect drainage of such marvelous efficiency that it is probably the cause of the superior results after vaginal hysterectomy. Ablation of the uterus also prevents future trouble from that organ. The immediate recovery is more rapid and the after effects are better, while the genital disturbance subsequent to suppression of the menstrual function seems to be less after ablation of the uterus with the appendages, than after ablation of the latter alone. Vaginal hysterectomy therefore, is the method *par excellence* for treating pelvic suppurations, and laparotomy only exists on its contra-indications.

Sänger, on the other hand, stated that the tendency in Germany is to favor laparotomy and ligatures, and a more conservative treatment. The Germans consider that it is far better to retain as much as possible of the genital organs than to extirpate them and resort later to the ingestion of ovarian tissue, etc., as a substitute for them. He rejects absolutely the idea of vaginal removal of a sound uterus as a preliminary to operating upon the adnexa, and states that the radical operation is not justifiable when the abdominal end of the tube is still open, nor in light cases of purulent salpingitis, abscesses of the ovaries, chronic, non-purulent affections of the adnexa, nor in simple, chronic inflammations of the uterus.

It is beter to have a menstruating uterus, even if it is slightly diseased, rather than none at all. On the other hand, the radical operation is completely justified in serious suppurations of the adnexa, pelvic peritoneum, or connective cellular tissue, when these affections coincide with a serious affection of the uterus, which alone would justify its removal, and also when the purulent affection of the adnexa has spread to the uterus; also in cases of tuberculous affections. Proximity to the menopause is an additional indication for radical treatment. The objections to vaginal operations are the necessity of commencing the operation at the uterus instead of at the diseased ovaries, also the impossibilty of arresting the operation; the incompleteness of the investigation of the field of operation as other purulent collections, appendicitis, etc., might exist and pass unobserved; the impossibility in certain cases of a truly radical operation, and the dangers of hemorrhages and of injury to the neighboring organs. In the case of slight suppuration of the appendages, when the pockets were not opened in the course of the operation, the peritoneal cavity can be closed without danger. The Germans prize highly the method of closing introduced by Kaltenbach and Olshausen, except in serious cases of radical vaginal operations. Whenever removal of the uterus is indicated, he considers celio-salpingo-oophoro-subvaginal-hysterectomy as the least dangerous radical operation. A part of the ovaries can even be retained with it. Drainage is indispensable in all cases of contamination of the hand of the operator or of an intact region with virulent pus; also when the hemostasis is not perfect or there is a discharge of virulent pus; also where there is a preëxisting fistula, or perforation of the intestine during the operation. He prefers Mikulicz's method of drainage, and adds that, thanks to this, the life of the patient can always be guaranteed, with complete recovery in time. Tamponing also relieves the anxiety of those who venture to close the abdomen. He classified some of the various methods in vogue as follows:

Vaginal methods: 1, anterior colpo-celiotomy (Dührssen, A. Martin, etc.); 2, posterior colpo-celiotomy (Steel, Hegar, Battey, Byford, Laroyenne, Landau, Mackenrodt, etc.); 3, anterior and posterior colpo-celiotomy (Bode, Von Erlach, Gottschalk), in combination with uni-lateral and bi-lateral salpingo-oöphorectomy; 4, colpo-hysterectomy (Péan's uterine castration); colpo-hystero salpingo-oöphorectomy or radical vaginal operation (Péan, Segond, Doyen, Landau). Abdominal methods: 1, celio-salpingectomy and uni- or bi-lateral celio-salpingo-oöphorectomy; 2, total celio-salpingo-oöphoro hysterectomy (Krug, Polk, Delagenière, Schauta, Bardenheuer, etc.); 3, bi-lateral celio-salpingo-oöphorectomy combined with supra-vaginal hysterectomy (Zweifel, Kelly, Sänger). Mixed methods: Abdomino-vaginal hystero-salpingo oöphorectomy, commencing usually with the vagina and ending with the abdomen (Landau), and finally, in a group apart, sacral or parasacral celiotomy (Hegar, Von Hochenegg, Czerny, Schede, etc.), which has only been performed by a few surgeons and with strict limitations.

Kelly's able presentation of his methods was read by the Secretary-General. Henrotin (Chicago) insisted on the benefits of immediate vaginal incision with digital exploration, and if necessary a second opening in the anterior cul-de-sac.

Richelot (Paris) remarked that extirpation of the adnexa through the abdomen was not always followed by recovery; and the surgeon was sometimes baffled by encountering extremely virulent pus. In every second one of the laparotomies he has performed since 1894 for suppurated adnexa he has been compelled to finish with double castration. Laparotomy triumphs where there are organs to be respected, which is, he considers, its true indication. He added that the tubes and ovaries are not heard from after the removal of the uterus, as often as the uterus after the removal of the appendages; concluding with the statement that vaginal hysterectomy should be accepted as the preferred method of treating pelvic suppurations, principally because it avoids the two dangers of laparotomy: infection of the peritoneum and injury to the small intestine. Hartmann (Paris) urged more general resort to repose in bed and vaginal antisepsis as the first, and sometimes, the only treatment needed for pelvic suppurations. He has also derived great benefit at times from dilatation and curettement, which may prove useless, but in certain cases seem to be all that is necessary. Péan lauded total vaginal castration as applicable to all pelvic suppurations of genital origin and sure to produce better results than any other method of treatment. Recovery is more rapid the earlier the operation is performed, and the mortality, in skilled hands, is only from 1 to 4 per cent. He concluded by mentioning the beneficial results he has observed occur in from two months to three years after the operation: disappearance of hysteria in 6 patients, of nervousness in 2, insanity 5, melancholia 1, morphinomania 2, ileo-lumbar neuralgia 4, mammary and intracostal neuralgia 3, nausea and rebellious gastralgia 2, anemia from inanition 2, headaches and sweats 4, inability to walk 1, gravel and nephritic colic 1, rheumatic endocarditis 1, bronzed pigmentation 1, and albuminuria 2. Péan now has a record of 350 operations and repeats his previous announcement, that total vaginal castration requires a special set of instruments, such as he has been using since 1883.

The other subjects discussed at the Congress were: "Surgical Treatment of Retro-deviations of the Uterus," presented by Küstner, Polk and Pozzi, and the discussion led by Martin, Bouilly, Lawson Tait, Doyen, Jacobs, Edebohls (N. Y.), Gill Wylie, Delettrez, Stapfer and Petit; "Best Method of Closing the Abdomen," presented by Granville, Bantock and La Torre; discussion led by Martin, Tait, Richelot, Laroyenne, Doyen, Jacobs, Edebohls, Gill Wylie, Byford (Chicago) and Delettrez; and "Relative Frequency and Shape of Abnormally Small Pelvis in Different Countries," etc., which were represented by Fancourt Barnes, Dohrn, Fochier, Kufferath, Lusk, Rein, Pawlick, Pestalozzi, Treub and Barry Hart.

## Fourth International Congress of Criminal Anthropology.

This interesting assemblage of the specialists who are fostering this infant science opened at Geneva August 24. Lombroso said in the course of his address, in regard to our prisons, that as at present conducted, the expenses have to be borne by the law-abiding citizens, and they fail to reform the criminal. The probation system, with work in mines, penal farms, etc., should take the place of our present prisons, and criminals from passion and political criminals should not be imprisoned at all, as exile alone is more than sufficient punishment. Confirmed criminals, epileptics, alcoholics, should receive special medical treatment, but the efforts of society should be espe-

cially directed to bringing up in a moral atmosphere the born "criminaloids" from the earliest months of their lives, with absolutely no intercourse with depraved associates and no opportunity for them to corrupt decent young people. With this should be combined every possible means to combat alcoholism, social, religious, with journals, pamphlets, etc., and constant medical supervision of the "criminaloids." Francotte spoke of a condition induced by alcohol which he calls alcoholic somnambulism. The individual acts in an apparently normal manner, but has no consciousness of his actions, or at least retains no remembrance of them. He considers it a legally irresponsible condition, except in cases of premeditated intoxication. Legrain's address was an appeal that the importance of alcoholism as an evil and peril to the nation should be inculcated in every way, taught in the schools and impressed upon legislators as their guiding principle. Habitual drunkards should be incarcerated, so that they could not propagate their kind, and compulsory cures legally enforced. Their children should be taken from them and societies formed for this purpose. Garofalo suggested that criminals should be classified as follows: 1, assassins; 2, violent; 3, dishonest; 4, cynics. Homicidal mania, pyromania and epilepsy would be included in the first category; hysteria and kleptomania in the third and sadism in the fourth. If penal science were relieved of some of the conventionalities which now encumber it, and the actual criminals separated from the mere revolts and disobediences, each type of criminal could then receive appropriate treatment and the science be established on a firm basis. Malarewski stated that the establishment of medico-pedagogic institutions and agricultural training colonies is the only means to reclaim children with a predisposition to degenerates, and that an international medico-pedagogic congress is the only means to accomplish the organization of such colonies. Other subjects presented were the influence of the press on criminality, anarchism from the point of view of criminal anthropology, or as Zakrewski prefers to call it, legal psychopathology, digital imprints and Bertillon's discussion of the gaps still to be filled in anthropometry. The members from Russia, Italy and Belgium were especially prominent in the Congress.—*Gaz. Méd. de Liège*, September 3.

## SELECTIONS.

**The Progress of Scientific Medicine and Pharmacy in China; A Conversation with the Physicians of Li Hung Chang.**—With the great Chinese warrior and statesman who has just honored our country with a brief visit, there came two attachés of the Chinese Imperial Medical Service, Drs. Irwin and Mark, for the purpose of insuring his health and physical comfort during his journey around the world. It has been the pleasant privilege of the writer to call upon these custodians of the bodily welfare of the Viceroy, and to talk with them in regard to the recent progress of western medical methods in the Celestial Empire.

Dr. George Mark's manner is most cordial and in every way pleasing; his English is so thoroughly excellent, that only his physiognomy and dress betray his nationality. He is in the foremost rank of the Chinese students of scientific medicine.

Dr. Andrew Irwin, an examiner and director of the Imperial Hospital at Tien-Tsin, is a genial Briton, who has come to favor and position among scientific men who are struggling to supplant the barbarous myths and superstitious practices of the Chinese physicians by the more human and more scientific methods of our western civilization. He appreciates the need of a change of this sort and the value of the progress already made, and finds pleasure in making known the condition of his favorite science in the country that has become the scene of his life work.

When the first medical missionary arrived in China in 1834, he found the medical methods of the country in a most deplorable condition. There was a scanty medical literature, of which one of the most important works was the Materia Medica of Li Shi Chan, which is known as the Pun Ts'o Kong Muk. Its first edition of forty volumes appeared near the close of the sixteenth century; the last of the four reprints was issued in 1826. This materia medica was a most inclusive one and it necessarily included many useful substances, as is shown by the following quotation: 'Whatsoever things are produced in the world—birds, beasts, creeping things and fishes, which are generated and have blood and breath; likewise flowers and trees, which are generated, but are without blood and breath; and also inanimate objects, such as rocks and hard iron—all of these can be used as healing medicines." There had been a so-called Imperial Medical College in Pekin since the thirteenth century, but it imparted no regular courses of instruction, rarely conferred degrees, and the skill and learning of the members of its faculty were reserved for the requirements of the royal family and the members of the court.

The native practitioners were divided into three great classes: 1, the class of specialists, of which there was a subclass for nearly every division of the human body; 2, a class whose attention was given solely to diseases of the internal organs; 3, a class that treated only external diseases. A case is often cited to illustrate this condition of affairs of which it is related that a man wounded by an arrow was first visited by a physician for surface maladies. He broke off the shaft of the arrow at the surface of the body and told the patient that further treatment must be had at the hands of a physician skilled in the diseases of the internal organs.

Acupuncture and cautery by the moxa were much in vogue; counter irritation was practiced by vigorously pinching the skin with the fingers, or by harshly scraping it with a stick dipped in water or oil, and by use of various plasters. The Chinese were pioneers in the art of massage, a rude form of it forming a part of the regular operations of the native barber shops. Surgery was almost unknown and its advance has been very greatly hindered by the belief that for well-being in a future state, the body must be kept intact; hence, we hear of the pulverizing and swallowing of extracted teeth, of the eating of an excised part, or of its preservation for burial with the body after death. The medicines used were notoriously inert in many cases, and were often most disgusting in the method of their preparation or in their origin. The right to professional rank had been passed from father to son as property is inherited. In the case of a break in the line of succession, the professional privileges were sold along with the estate. Almost no study was necessary to inspire the patients with awe and faith, if the right to practice had been obtained by either purchase or inheritance from a family having a reputable ancestry of noted physicians. It has been said that "Were all of the native practitioners in the empire at once swept away, the Chinese people, so far as their prospects of health and longevity are concerned, would sustain no very serious loss."

During the last half century, the labors of the medical missionaries and other physicians from America and Europe, have done much to relieve the immediate sufferings of the people and have worked a very marked change in the practice of the native physicians in the more accessible parts of the empire. Between fifty and one hundred hospitals have been established by the efforts of various denominational organizations, and more than two hundred medical missionaries have taken part in the work, including more than a score of women. Many Chinese men and women have been trained for physicians and nurses in the hospitals, or in private study with the physicians. An association was formed in 1887, called the Medical Missionary Association of China, of which the official organ is the *China Medical Missionary Journal*, at present edited by S. R. Hodge, of Hankow, and published quarterly at Shanghai by the American Presbyterian Mission Press. Many medical works and treatises on the allied sciences have been translated into the Chinese language. Dr. John G. Kerr, an American medical missionary who went to Canton in 1854, has been especially active in this work, having issued more than twenty-five medical text-books in the Chinese language. Fryer has translated the chemic treatises of Bloxam and Roscoe, and also several books on physics, botany, materia medica, etc.

The late Dr. Osgood, an American medical missionary, issued a Chinese edition of Gray's "Anatomy"; Hunter has translated Squire's "Companion to the British Pharmacopeia." Martin, Smith, Allen and the Chinese physician Suvoong, are to be included among the names of those who have made contributions to the literature available for Chinese medical students who read only their native language.

More than one hundred American and European physicians not connected with the missions, have taken up their residence in China, and are engaged in private practice. A Hong-Kong Medical Society has been formed by the physicians of that city; a volume of their transactions was published in 1889. Dr. Irwin mentioned Drs. Manson and Cantlie, since retired, as among the most prominent of the founders of this society. Each of the ports open to foreign commerce has a "Surgeon to the Customs." In 1870 the Inspector General of Customs issued a request for a semi-annual report from these medical officers of the different ports in regard to the condition of the health of foreigners and citizens in their respective provinces, together with the results of studies of new diseases or of diseases rarely met outside of China. These reports are published annually under the title "China Imperial Maritime Customs: Medical Reports."

Dr. Irwin described the founding and success of the Imperial Medical College of Tien-Tsin, in connection with the Yang Ping Yuen (Imperial Hospital of the North), with great pride and feeling. The first class was examined for graduation in 1883. Of the eighteen candidates for diplomas, twelve passed. Dr. George Mark, of the Viceroy's party, was at the head of his class, of which another member is now in America for the completion of his medical education. The school was not reopened until November, 1893. There are now twenty-six students enrolled, eleven in the second year class and fifteen just beginning. The course of study requires four years for its completion. There is no separate school of pharmacy, but the students of the medical school are given instruction in the preparation of medicines. The school and hospital are both in charge of Dr. Houston, an European. There are four regular lecturers, one European and three Chinese. The medical officers of the Navy often lecture also, when their vessels are stationed conveniently. The hospital has sixty-five beds and is taxed to its utmost capacity. There is also a hospital for women, having thirty-one beds, which is in the charge of Mrs. Dr. Howard King, formerly of Philadelphia.

Dr. Kin Ta Chin, a member of the class of 1883 of the Imperial Medical College, has been decorated for his services as commander of the field corps of the Imperial Medical Service during the recent war with Japan, and is now in charge of the field hospital of the army of North China at Kin Chou.

Dr. Irwin spoke in most complimentary terms of the assistance rendered by the surgeons of our navy during the Japanese war. Especial mention was made of the work of Dr. Philip Leech at the Isabella Fisher Hospital, which is superintended by an American woman, Dr. Rachel Benn; and also, of the valuable services of Dr. Ames, who has been consulted by the Viceroy, and who ably assisted at Che Foo in caring for the wounded from Port Arthur and from the naval engagement of Yaloo.

"We place no reliance on the medicines of local manufacture," said the doctor in reply to a query, "but use only those imported from Europe and America. Many of the large manufacturers and dealers have branches or agencies in the Empire. The government contracts for drugs and medicines are a small matter in time of peace; five hundred gold dollars would cover the whole bill for one year."

There are drug stores kept by foreigners of different nationalities, and quinin and some other foreign drug staples are found on the shelves of the natives shopkeepers.

A number of American and English dentists have established offices in the larger cities, but very little advance has been made among the native workers. Chinese dentistry is crude and a fakir's art. Mercurial preparations are used for loosening the diseased tooth, when it is extracted by means of a string or rude forceps—often with a sleight of hand accompaniment to prove to the patient that the trouble in the aching tooth is due to a worm. A worm is smuggled into the patient's mouth during the operation, again removed and exultingly exhibited. Artificial teeth are made from bone and fastened in the mouth by attaching them to the sound teeth with a wire or a string.

Now that the government has evidenced its appreciation of modern scientific medical methods by establishing and maintaining a school in which they may be taught to the youth of the land, and men from all parts of the empire have had occasion to either experience or witness their success and benefits during the recent war, we may safely regard this as the era of the triumph of science in China—we may hope that the day is not far distant when plasters of powdered tiger's teeth have lost their repute as remedies for the healing of external injuries; when jelly prepared from bear's paws has lost its alterative power; when potions made from the horn of the hart are no longer used for the renewal of wasted vitality; when Chinese mothers can eat chickens, ducks or turtles without fear of destroying the hearing or eye-sight to their unborn babes, or can look upon a hare or rabbit with no qualm over a possible harelip for the unborn one.—E. E. EWELL in *Pharmaceutical Era*, September 10.

**A Case of "Sadism," or Sexual Perversion with Violent Tendency.**—Dr. Morton Prince, in *Boston Medical and Surgical Journal*, reports a case of this nature in a male aged 22 years. By "Sadism" is meant the association of cruelty or violence with lust, the name being derived from the notorious Marquis de Sade, whose obscene novels treated of lust and cruelty.

Dr. Prince's patient before coming under his observation had been regarded as being the subject of neurasthenia or hysteria. His relatives made a diagnosis of general laziness, while others described him as being not quite right. His mental state was unknown to others until, after great difficulty, Dr. Prince obtained a full confession. It was his custom to lie upon the bed in the daytime and fall into a sort of trance or day-dream state, in which he was apparently between waking and sleeping. He said he thought he was awake, because if anyone should knock on the door or come into the room he would know it. While in this state he used to imagine that he killed and mutilated women. It was not possible to learn from him the exact mode in which this habit began, or what was the original exciting occasion, but his imagination began in a moderate way and afterward extended. At first, it was only a single woman whom he imagined he thus mutilated, but afterward in each "séance" he destroyed great numbers. His imagination seems to have created actual hallucinations, for he said that at these times he actually saw his victims with great vividness as objective realities and had the sensations of actually killing them; for the time being his acts were absolutely real to him, and soon a belief in them persisted.

At first it was a single girl whom he mutilated; he killed her, tore her to pieces and ate her; later he imagined that he lived in towns where it was the custom for the men to destroy all the women in this way. Then, as the habit grew, the towns became cities and the cities countries. These countries were completely depopulated of the women by the men, all of whom together held these Sadistic feasts.

While indulging in these dreams or hallucinations, he had most intense sexual excitement with emissions. His habit was thus a form of masturbation, the peculiarity being the association of sexual feeling with hallucinations of cruelty. When in the waking state he seemed to be at times confused as to whether he actually committed these imaginary murders or

not; for while at one time he said he had not, at other times there was sufficient confusion in his mind to make him think that he had committed these unpardonable sins and to be in great misery in consequence; he would then be in a state of great penitence, which was not understood by his mother until this confession was obtained. He also admitted to me that at times he thought he had actually committed these acts. He had practiced this habit from the time he was 10 years old until about 20, that, is up to about two or three years ago. During the last two years this habit had largely died out, but there has been (September, 1895) a tendency to recurrence. It was apparent that such a person was dangerous to the community and that at any time there was a possibility, under favorable conditions, that he might put what had hitherto been pure imagination into actual practice; we therefore sent him to an asylum without delay. He denied that in mutilating the bodies of his victims that he selected any particular parts of the body, as is the case with many Sadists.

His general condition was one of neurasthenia. He had much depression and suffered from great anguish of mind from which he broke down and cried at times, saying that he "suffered intensely," but could not describe very definitely from what particular feeling; it seemed to be more an anguish of mind.

His heredity is bad, and throws light upon the distinctively degenerate character of his mental condition. His mother was excessively neurasthenic. One maternal aunt was described as nervous, with abnormally fixed ideas on certain social subjects, and two maternal aunts suffered from hysteria. A maternal brother was delicate and always on the point of breaking down. His maternal grandfather was a very able and physically strong man, with decided elements of genius. He is well known to the public and recognized to be very brilliant mentally, but a man of very extreme opinions. Up to the age of 40 he had a tendency to melancholia. The maternal grandmother was neuralgic, ailing, neurasthenic. The patient's father was eccentric and a dipsomaniac. One paternal aunt was well; a second was described as having a bad temper and at one time as having had delirium (about this my notes are confused). A third had hysteria. Two cousins, sons of the second paternal aunt, both drank to excess. The first paternal aunt had four children; of these, one had a sort of puerperal insanity, from which she recovered. Two paternal uncles are said to have died of dissipation.

The early history of this patient is interesting, as showing the progressive physical descent (*facilis descensus averni*) of such a case. Since 2 years of age always more or less out of order; 5 years of age, attacks of nausea, vomiting and headache with fever, delirium alternating with coma; these attacks were followed by excessive weakness; slow recovery from weakness which persisted until the next attack, which occurred at the end of about one month; he lost flesh and his temper became irritable, so that he became violently excited and enraged over little things.

Several eminent physicians of New York were consulted. One said that he was unable to make a diagnosis. A second said it was brain disease, and a third said it was lithemia from the liver. Accordingly he was treated for this last with calomel, with the apparent results that after this he had no more attacks but only premonitory signs, which were always stopped by calomel.

This perversion of the sexual instinct is the exciting motive of many notorious murders. The Whitechapel murderer was undoubtedly the subject of Sadism. Similar instances are well known and may be found described in the literature. The subject is an important one from a medico-legal point of view, as well as of psychologic interest; and it is desirable that the motives leading to crimes of this kind should be thoroughly recognized. Lust murders, not murders for the purpose of concealing or committing rape, but violence and murder for the purpose of inducing sexual excitement in the murderer, are probably more common than is generally supposed. The sexually exciting element in such cases is the sight or smell of blood, or the cutting, tearing or mutilation of the victim's flesh. Verzeni found, as he confessed, unspeakable delight in strangling women, experiencing during the act erections and real sexual pleasure. Some find delight in actually eating the flesh or drinking the blood (Leger, Verzeni). Sometimes special pleasure is found in cutting or tearing out the uterus, ovaries and genitalia, which are carried away (Whitechapel murderer), but this is not always the case, and the victims are not mutilated in this respect.

A similar perversion is found in the excitement which some have in harmlessly cutting, beating or whipping women and boys. A case has been brought to my attention of a man who was in the habit of visiting a prostitute whom he used to strike over the nates with a shingle. No coitus was indulged in.

## PRACTICAL NOTES.

**Early Symptoms of Diabetes.**—Unschuld calls attention to an early symptom of diabetes which is seldom mentioned by writers on the subject, but which is yet frequently found, and may assist in an early diagnosis of the affection. This symptom consists in cramps in the calves of the legs, and is found in about 26 per cent. of all cases. The pains occur with especial frequency in the morning upon waking, and occasionally also during the night. They are rarely troublesome in the daytime, unless after a nap or a bath. Cramps of this nature, occurring in a person in feeble health, should always suggest the necessity of an examination for sugar.—*Health*, September 11.

**Changes in Urine from Medicine.**—Oleoresins and balsams (copaiba, sandal oil, turpentine and its derivatives) taken as medicines often give a yellowish zone at the circle of contact between the nitric acid and the urine in the cold test for albumin. From a ring of albumin, however, this cloud can be easily distinguished by its solubility in alcohol. Concerning the test for glucose, many organic medicaments (chloral, chloroform, turpentine, glycerin, salicylic acid, etc.) give rise to urinary ingredients which reduce copper solutions to a less or greater degree on prolonged boiling. The phenylhydrazin hydrochlorate test will differentiate all these reagents from dextrose. Sulphur (or albumin which contains it) gives a black precipitate with Boettger's bismuth test for glucose, and hence must be excluded as a factor if this method be used.—*Ed. Denver Med. Times*, September.

**Hemol Bromid.**—The *Medical News*, August 29, quoting Dr. Kobert in the *Therapeutishe Wochenschrift*, states that that observer has been seeking to obviate the unpleasant after-effects of the inorganic bromids and to that end has "been making trial of an organic bromid which has no injurious effect upon either the blood or digestion. It contains only 2.7 per cent. of bromin, as against 67 per cent. which bromid of potassium contains. But only a small portion of the bromin contained in the latter salt exerts any action in the body. Holst used bromid of hemol in fifty cases of nervous disease. If a rapid effect was looked for, two grams (thirty grains) were given three times a day. One-half or one-third of this dose was employed for a calming effect. In epilepsy and hysteria, he obtained no good results where the inorganic bromids have shown themselves efficacious. In insomnia, the results were equal to sodium bromid, without any unpleasant sequelæ. The conclusion is that bromid of hemol is not capable of replacing inorganic bromids where a rapid effect is desired. It is indicated, however, in cases where the sedative and long-continued action of bromin is sought for."

**Diagnostic Value of Percussion of the Vertebral Column.**—Becherew calls attention to the importance of the results attained by percussion of the sacral region of the spinal cord. He has derived great benefit from it in obscure cases, and urges its general adoption. He describes one traumatic case with symptoms of compression of the cauda equina, plantar, genital and perineal anesthesia, spontaneous pains in the joints, pain on percussion of the sacral region, disturbances in the sphincters, etc., with fever. Percussion of the triangle, whose base corresponds to the upper part of the sacrum and the point to the coccyx, produces in normal conditions a slightly tympanitic resonance. In this case there was a distinctly limited dullness and an operation confirmed exactly the diagnosis as to the seat of the lesion. Caries was disclosed in the serum with a fungus mass compressing the cauda equina.—*Gaz. degli Osp. e delle Clin.*, August 4.

**Mechanical Treatment of Sciatic Neuralgia.**—Negro of Turin, has cured or materially improved 100 out of 113 severe cases of sciatic neuralgia that had resisted all other treatment, by compressing the nerve. The patient lies flat on his face, the lower limbs touching and stretching to their fullest extent, and the point is found by palpation where the sciatic nerve emerges from the ischiatic notch, which is usually the most painful spot. The right thumb is then pressed on the nerve, reinforced by the left thumb, and the strongest pressure possible exerted for fifteen to twenty seconds, turning the thumb so as to distribute the pressure laterally over as much surface as possible without removing the thumbs. This process is repeated after a minute's rest several times, the pain growing less each time. Five or six of these treatments on successive days produce good results.—*Memorabilien*, August 5.

**Formic Aldehyde as a Disinfectant, and Method of Application.**—At a meeting of the Maine State Board of Health, Professor Robinson reported that the tests of formic aldehyde which had been made had given very encouraging results. He exhibited to the board the workings of a lamp which he had constructed for its application. The lamp consists of a cylinder into which wood alcohol is continuously fed from a tank similar to that of a German student's lamp. In the top of the cylinder is fitted a diaphragm of copper gauze consisting of two layers, between which is a layer of especial material. Upon the application of gentle heat to the gauze the alcohol below begins to vaporize and change into formic aldehyde, a gas having the germicidal properties of sulphurous acid gas, but in a greater degree. The vaporization progresses as long as alcohol is supplied. Professor Robinson detailed experiments which had been made at the Bowdoin laboratories upon pure cultures of disease germs and upon infected bedding and clothing, by which the germs were quickly killed. Subsequent cultures made from infected articles were found, after exposure of the fabrics to the fumes from the lamp, to have been absolutely sterilized. About a pint of the alcohol, vaporized, would supplant the atmosphere in a room of 3,000 cubic feet.—*Sanitarian*, September.

**The Hypnotic Potency of Trional.**—In an article which appeared in the *Wiener Medicinische Presse* for April 1 and 8, 1896, and is summarized in the *Wiener Klinische Rundschau* for June 21, Dr. Richard Drews, of Hamburg, remarks upon the frequency with which the physician finds it his chief task to secure for the patient a few hours of quiet sleep, so that he may not only be freed from distress for the time being, but supplied with fresh endurance to battle with the disease. For this purpose a hypnotic is required that is easily taken, that promptly induces restful, dreamless, normal sleep, from which the patient awakes refreshed and strengthened, that is harmless and as free as possible from unpleasant collateral and remote effects, that does not beget a habit, and that can be taken for a long time.

Judging of trional from its action in thirty cases, Dr. Drews thinks it such an ideal hypnotic. Nineteen of the patients were adults and eleven were children. The causes of sleeplessness in the adults were neurasthenia once, hysteria twice, a phlegmon of the hand once, articular rheumatism twice, muscular rheumatism once, sciatica three times, prurigo once, trigeminal neuralgia once, a scald of the foot once, intercostal neuralgia twice, cancer of the uterus once, and pulmonary and laryngeal tuberculosis with severe paroxysms of coughing and profuse sweating at night three times. In the children there were otitis media three times, meningitis with convulsions once, chorea once, night terrors twice, epilepsy once, pneumonia with severe agitation once, and furuncle of the ear once. For the adults, the dose ranged from fifteen to twenty-two grains; for the children, from three to twelve grains, according to the age. It was administered in strict accordance with Goldmann's directions. The adults took it in bed in a cup of hot milk and then drank another cup of milk; the children took it in their evening broth or in a cup of hot tea. In cases accompanied by severe pain twenty-two grains were always given to the adults instead of fifteen grains. In twenty-eight of the cases the result was invariably a restful, calm, natural sleep, coming on in the course of fifteen or twenty minutes, and on the following morning the patients felt refreshed and as well as the nature of the disease admitted of. In two of the cases, that of phlegmon of the hand and that of cancer of the uterus, the hypnotic action was delayed for an hour or an hour and a half, and did not last for from six to eight hours, as in the others, but only for three or four hours. Both these patients were sleepy the next morning and complained of oppression in the head, of headache, and of weakness, and the one with uterine cancer suffered also with ringing in the ears and with nausea. These phenomena occurred for several days after each administration of trional, but strict questioning brought out the fact that it had not been taken in the precise manner prescribed.

**Treatment of Ozena with the Antidiphtherial Serum.**—Drs. Bellfanti and Della Vedova are quoted in the *Medical Week*, May 1, as follows: Bacteriologic examinations made by the authors led to the conclusion that ozena is caused by a microörganism identical in form and cultural peculiarities with Löffler diphtheria bacillus, though differing from it in diminished virulence. The organism was not only found upon the surface but also in the depth of the nasal mucous membrane. According to the authors, it causes the chemic alterations of the secretion, the fetid odor, and the atrophy of the mucous membrane and of the bones. These results led them to undertake the treatment of ozena with diphtheria antitoxin. The results obtained were most remarkable, for of thirty-two patients sixteen were wholly cured, seven almost healed, five rapidly improved, and in only four was improvement slow. Ten c.c. of diphtheria antitoxin was injected every second day or, when possible, every day. The number of injections varied according to the age of the individual, the length of time the disease had existed, and the degree of local and general reaction. On an average 30 c.c. were required to effect a cure. At first the injections caused congestion of the nasal mucous membrane. Soon thereafter the fetid odor disappears, the secretions become liquid, and the formation of crusts ceases permanently. The accidents which compel suspension of the treatment are the same as those observed in the treatment of diphtheria and are without danger.

**Report of the Employment of the Toxins of Erysipelas upon Malignant Tumors.**—In the *Annals of Surgery* for July is given the minutes of a recent meeting of the New York Surgical Society, a part of which refers to the above subject. At that meeting Dr. L. A. Stimson, Dr. A. G. Gerster and Dr. B. F. Curtis submitted the following report upon the use of toxins in the treatment of malignant disease: "Both before and since our

appointment as a committee we have been able to observe, individually and together, a considerable number of cases treated by this means, and in no case have we found any amelioration which held out a prospect of ultimate cure. We have, on the contrary, observed in some cases that the rate of growth of the disease was much more rapid during the treatment. The treatment also imposes a very severe tax upon the strength of the patient, and apparently hastens the cachexia in most cases. We believe that in the instances of apparent cure or marked improvement the correctness of diagnosis is open to doubt. We therefore submit: 1. That the danger to the patient from this treatment is great. 2. Moreover, that the alleged successes are so few and doubtful in character that the most that can be fairly alleged for the present treatment by toxins is that it may offer a very slight chance of amelioration. 3. That valuable time has often been lost in operable cases by postponing operation for the sake of giving the method of treatment a trial. 4. Finally, and most important, that if the method is to be resorted to at all, it should be confined to the absolutely inoperable cases."

**Echinococcus in the Liver Cured by Bacelli's Method.**—The *Annali di Med. Navale*, No. 7, describes the case of a sailor brought to the hospital with severe pains in the right flank, fever, dyspnea, insomnia, greatly hypertrophied liver and evidences of a hepatic tumor. An exploratory puncture confirmed the diagnosis of echinococcus, as hooks were discovered in the limpid liquid withdrawn, which contained no albumin and very little glucose, but chlorid of sodium in abundance. The only question then was whether it was a unilocular or multilocular cyst. In the latter case the tumor is usually solid, painful on pressure and knobby, with hypertrophied spleen and a purulent or serous effusion in the peritoneal cavity, with pronounced icterus and intestinal hemorrhages. These symptoms were absent in this case and the diagnosis of a unilocular cyst was confirmed by the recovery of the patient. Thirty grams of Van Swieten's solution were injected with a Kurschmann syringe and 700 grams of liquid withdrawn. The fever ceased the fourth day after this injection. Two liters were afterward withdrawn with a Potain needle, which completely emptied the cyst. Appetite and sleep returned and the general health slowly improved, the liver subsided to its normal size and the heart and spleen returned to their normal position, but six months passed before the recovery could be considered complete.—*Gaz. d. O. e d. C.*, August 23.

**Straightening the Spine by Wiring the Spinous Processes Together.**—Chipault's new method of treating caries of the spine is described in the *Therap. Woch.*, No. 35. The spine is straightened and held in this position by wires that fasten the spinous processes together, so that the orthopedic appliances do not have to contend with the constant tendency to curvature. After chloroform the patient is placed on his belly, three-quarters pronation, the back turned to the operator. A longitudinal opening is then made along the spinous processes, two to three vertebræ above and below the limits of the curvature. Without touching the interspinous ligaments both sides of the processes are exposed, and the soft parts drawn aside, the assistant at each end then pulls the spine to straighten it as much as possible, and a silver wire is passed through the interspinous ligament above the highest process to be ligated at the bottom near the root. The wire is then cut, leaving on each side a piece twice as long as the wound. The ligating is done with these two ends, crossing them back and forth and passing them through each interspinous ligament from the highest process downward until the lowest is reached, when the two crossed ends are twisted together. The wires must be passed through the ligaments close to the lower edge of the process above to afford as firm a support as possible. Each crossing must be tested to see if it is strong and taut before proceeding to the next. The soft parts are then sutured without drainage, bandaged and the patient is placed in bed. The two difficulties, lateral curvature of the spine and anchylosis of adjoining processes, are met by boring a hole in the processes in the latter case, and in the former by extending the end of the wire on the convex side up to the loop at the top and stretching it tight, which straightens also the lateral curve. In cases of lumbar or dorsal caries, the bandage can be changed in five to six days and in cervical caries in ten, and the stitches removed from the soft parts. This ligature of the spinous processes is undoubtedly an advance in the treatment of Pott's disease, but it only applies to moderate curvatures of recent origin, that have commenced suddenly and developed rapidly and are capable of reduction in anesthesis, and to weak spines. It is not adapted to old curvatures or those involving too many of the vertebræ. The presence of an unopened cold abscess or of paralysis is no obstacle. Absolute immobilization should follow the operation.

**Arsenic in Scarlet Fever.**—A Russian physician, Speransky, announces that he treated a large family of children with arsenic as a preventive measure, when one was attacked with fatal scarlet fever and isolation was impossible. Although they slept with the sick one, none of the rest took the disease except the oldest, 18 years, to whom the arsenic had not been administered and the youngest, who had been neglected and had only received occasional doses, with none at all for several days before the disease appeared. The arsenic was administered in Fowler's solution, half a drop at each of the two principal meals (8 and 9 years) with half this amount at 3 years. When the 3-year-old child was taken with the disease he received half a drop three times a day, with powders of phenacetin and terpin hydrate; the 18-year-old four drops with the powders. The arsenic attenuated the disease in a remarkable manner after it had developed, with no fever after the first day and the child so well that it was impossible to keep it in bed. The other cases treated outside showed the same results, a striking improvement in the course of the disease after the first day, with complete recovery in a week. The preventive doses were continued for six weeks.—*Semaine Médicale*, August 26.

**Hydatic Cysts of the Liver.**—Bobroff injects salt solution into the cyst pocket after he has emptied it, to prevent the liquids from the neighboring organs finding their way into it and recommends this process to others. In a recent case, after removal of the hyatid and cleansing of the pocket with gauze, he excised a piece 12 centimeters long and injected 250 grams of the salt solution. The inverse edges of the pocket were then closed with a double row of sutures and the abdomen closed completely. The wounds healed by first intention with only a slight rise in the temperature one day, and the patient left the hospital entirely cured in a month.—*Union Méd.*, August 15.

**Hot Water Vaginal Injections.**—In the treatment of female pelvic diseases by hot water injections Dr. J. H. Burtenshaw gives the following rules for method of application: 1. Use a large-sized fountain syringe, preferably one holding four quarts, attached to a support three or four feet above the body. 2. Always lie upon the back with the hips slightly elevated and the shoulders depressed. 3. Use at least three gallons of water as hot as can be borne—at a temperature of from 110 to 115 degrees Fahrenheit. 4. Take the injection twice daily, morning and evening, except on the two days preceding and the two days following the menstrual flow. In cases of chronic leucorrheal discharge in which additional astringent elements, to the douche, are indicated, he adds a tablespoonful of the following mixture to the last quart of water: Pulv. alum, zinci sulphatis, sodii biboratis, ac. carbolici, aa ℥j; aquæ, ℥vj.—*N. Y. Polyclinic*, September.

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INFORMATION WANTED.

It would greatly facilitate the prompt delivery of the JOURNAL to those members of the ASSOCIATION living in large cities, if they would kindly furnish this office with their street address in those cases where it is omitted from the wrapper of their JOURNAL, as we have been notified by the postmasters of the larger cities that second-class mail matter not having street address, would be placed in the general delivery to await call.

SATURDAY, OCTOBER 3, 1896.

## THE MURDER OF THE INNOCENTS.

The incidence of mortality in the first years of life is a well-known showing of all tables of vital statistics, but its preventable factors are not so clearly recognized, while far behind lags the resolution to make theoretic knowledge a realized fact. Talk as we may about the disadvantages of "grandmotherly government" and "socialistic legislation," no one can affirm that in matters of preventive medicine and hygiene there can be too much governmental oversight. The wisdom and morality of the few must become that of the many, and it can only become so by stringently penal legislation and executive control. Human nature is at least not yet sufficiently ethical to be allowed indiscriminate and unscrutinized control over the young life that comes to it.

Take the matter of child life-insurance as an example. Is it not evident that parents too poor to bury a child should be held too poor to pay premiums on the insurance of the child's life? And yet this is the excuse constantly made by parents, either sincerely or deceitfully, to justify the custom. What a clear temptation to murder.[1]

The English medical journals, especially the *Lancet*, have in late years been active in showing up the prevalence of this abuse in England, where it is undoubtedly of greater extent than with us. From an editorial in the *Lancet* in 1895 (i. p. 428) we learn that of 4,629 children recently subjected to cruel treatment, 1,237 were insured. Another editorial in the *Lancet* (1895, i, p. 166) on infant neglect, insurance and mortality, among other things says: An unfortunate infant, whose death was recently investigated by the coronor for the West Middlesex district, might have been saved by medical aid (which might have been had for a mere pittance), but the parents claimed they were unable to pay a physician anything, yet the insurance premium on the child had been promptly paid up to its death. Facts like these sicken the public conscience. The *Lancet* calls for drastic reforms, and says the insurance should only be for an amount of the bare cost of the funeral arrangements (which is very cheap in England compared to our funeral rates, we believe). The same editorial urges that evidence of criminal neglect or mismanagement should disqualify parents even for the small sum insured. This seems to us very clever, as it shifts the burden and expense of proof on the interested corporation, who would likely be more rigorous in their search for evidence exempting them from payment of the policy than the municipal authorities, ordinarily interested parties.

In May, 1895, Sir RICHARD WEBSTER read in the House of Commons a bill providing for the maintenance and encouragement of the mutual benefit principle in such insurance, limiting the sum insured to an average almost as low as that of the friendly societies, £2 ($10) up to 10 years of age. This bill also entails upon physicians the duty of inquiring as to the fact of insurance before granting a certificate of death, and a like service is required of the register. It allows a child to remain under the protection of this act until 16 years of age. The *Lancet* says: "We are aware of no present limitation except the inability to pay the premium, and the average of £4 ($20) and a maximum of more than twice this sum is not uncommon, while payment in some clubs may be made partly in spirits. It is significant also that wilful neglect of infants, according to a recent return, has been shown to be much more common under the non-mutual system" (that is, those clubs not organized by workmen for their mutual benefit). We know nothing relative to the ultimate disposition of this act, and are not aware of any legislation in Great Britain limiting infant insurance. According to the *British Medical Journal* (1895, i, p. 291), the reports of the Select Committees on Friendly Societies, 1875 and 1888, contain a large amount of information upon this subject.

FRANCIS VACHER (*Lancet*, 1895 i, p. 254) suggests that legislation should prohibit all private corporations or individuals from insuring infants' lives, and that the government be empowered to enter into an agreement to inter any child free of cost, on payment of a small

[1] In the *Lancet* of April 20, 1895, a member of the Massachusetts Society for the Prevention of Cruelty to Children said she found families in which children were deprived of the most ordinary necessities of life while money for the insurance of the dying child was put aside. Several other similar instances equally pitiful are given. The cost of infant burial is within the reach of thrifty people, and for the rest, in all countries the community is bound to bury when others can not.

premium at the nearest post office, thus reducing cost of insurance and bringing it directly under the law. Such a measure we do not think necessary or wise, and for us it is, of course, out of the question.

As to our own country, affairs are in a chaotic state. In 1895 a bill was reported to the Massachusetts legislature providing that no life insurance company shall issue a policy upon the life of any child under 10 years of age, living in that State. The penalty was fixed at $100 for each offence, the law to come into force September 1, 1895. Whether the law ever came to vote or not (probably not in these days of "politics") we do not know, nor whether other States have attempted similar regulation. Medical men in charge of the medical departments of life insurance companies should bestir themselves, both as officers and members of society, to bring about judicious and and needed legislative reform.

Another cause of infant mortality is overlying. It will doubtless surprise even physicians to learn that one thousand children are each year killed in London alone by this careless (or perhaps often intended and criminal) custom. Yet such is the estimate of a London coroner. From an editorial in the *British Medical Journal* (1895, i, 36), we excerpt:

> There are sad sides to a Merry Christmas, and not the least sad of these this year has been the sacrifice of infant life from overlying. On December 27, 1894, Mr. BRAXTON HICKS held five inquests on the bodies of children who had died while sleeping with their parents, the cause of death in the majority of cases being suffocation. The coroner said he could not persuade parents to get cots for their children, and that a thousand infants were overlain in London alone every year. The matter is extremely serious. Perfectly healthy children are sacrificed to the bad habit of making them sleep with their parents. It is perhaps difficult to draw the line and to separate thoughtlessness from carelessness so gross as to be criminal, but Liverpool statistics showing the enormous frequency of deaths from overlying on Saturday night points to the fact that the carelessness is gross, and that unless drink be accepted as a general excuse for crime, the action is in a large proportion of cases criminal. Mr. BRAXTON HICKS announced that he would make it a rule in all future inquests of this character to disallow the expenses of the parents, a course which he adopted in each of the five cases before him. The fight against preventable diseases is hard enough, but it seems harder still to prevent the effects of carelessness and folly.

Of infanticide, every physician is well aware that neither the ancients nor present-day savages have a monopoly of the practice. In every city there are men either with or without a medical degree who make a profitable business by murder, through abortion. There are many reasons why these criminals can not be brought within the reach of the law, the principal of course being the inability to secure evidence against them. Their "patients" will not tell, but the evidences of their work are well known to every gynecologist. One thing is, above all things, certain: There should be compulsory inspection and registration of all "stillborn" infants. BRAXTON HICKS (*British Medical Journal*, 1895, ii, p. 1540) relates an instance illustrative of the ease in which a child may be killed and falsely registered stillborn. The child, plainly a viable one, after being smothered was boldly thrown out into the middle of the road to rot. We would urge upon our general medical associations and societies the duty of promoting such badly needed legislation. They might also profitably institute investigation and control of the disgustingly much-advertised lying-in institutions where "for a consideration," infants after delivery are "supplied with homes."

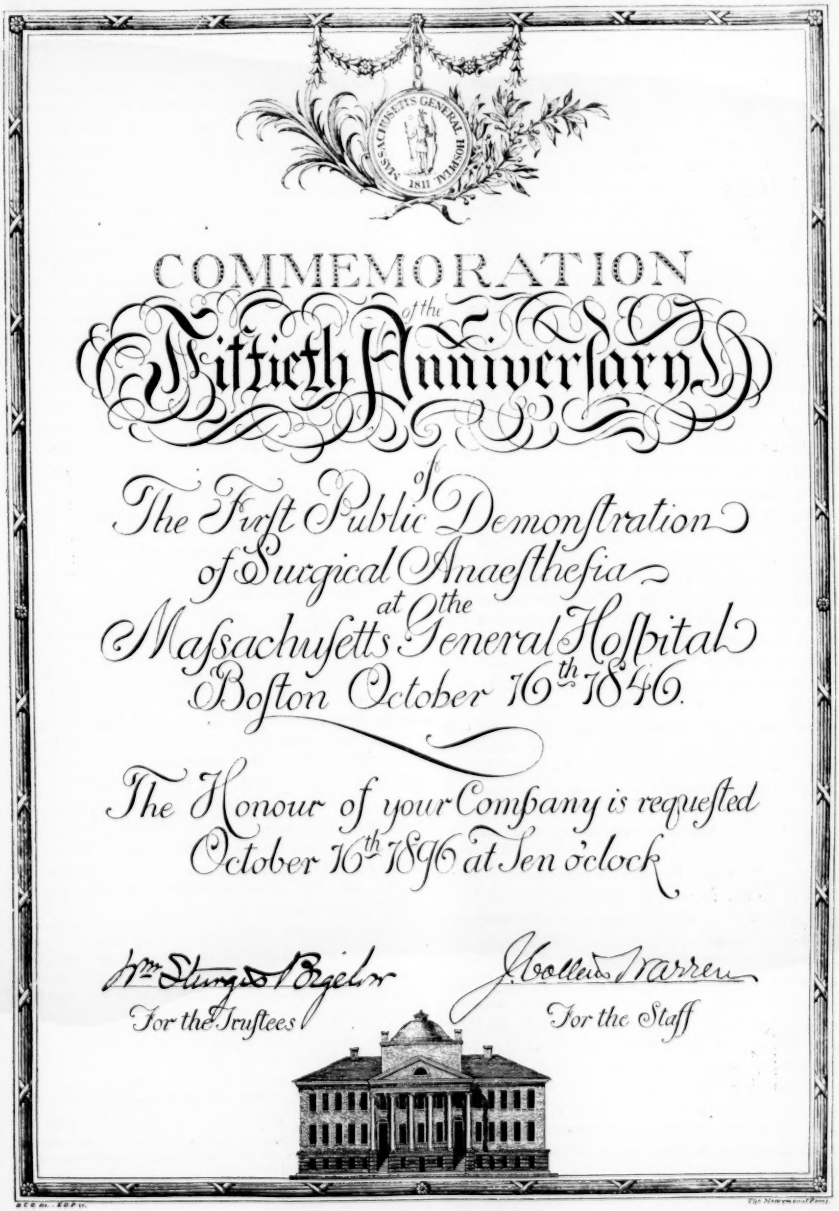
Undoubtedly it is a difficult matter to educate the community in the care of children and in the value of child-life. The law and a sensitive conscience are agreed that murder of an unborn fetus is as much murder as of one born, and that infant murder is as much murder as is adult murder; but ordinarily the lower classes make an unconscious sliding-scale of criminality increasing in approximation to real murder of the adult, and beginning with conception, when and shortly after, "getting rid of it" is by no means sinful. Against such a tendency in the interest of civilization and ethics we must all protest with what power we may. But the efficacy of our protest will depend upon the numbers that speak, the publicity of the protest, and the effectualizing of it in legislative enactment.

## CELEBRATION OF THE INTRODUCTION OF ANESTHETICS.

October 17, 1846, a venous tumor of the jaw was removed by Dr. WARREN without pain, the patient being placed under ether by WM. T. G. MORTON, a Boston dentist, and the next day a fatty tumor was removed, and in a few days, after the performance of some minor operations, Dr. HAYWARD, in the presence of Dr. H. J. BIGELOW and others, amputated the thigh of one ALICE MOHAN, MORTON, as before, administering the ether.[1] "From this date," says LYMAN, "the success of anesthesia was placed beyond all doubt. The great discovery was immediately heralded throughout the civilized world, and was everywhere adopted with the utmost enthusiasm."

To properly celebrate the semi-centennial of this great discovery, the Massachusetts General Hospital have issued an invitation to a limited number of guests to participate in the ceremonies. We print elsewhere a reduced fac-simile of the card of invitation. It will be noted that nothing in the invitation can be construed into an assertion of priority of use; for the medical public are now well aware that sulphuric ether had been used by inhalation for dentistry and minor surgery by W. E. CLARKE and CRAWFORD W. LONG, but it was reserved for the Massachusetts General Hospital to have the first capital operation, and to make the world hear. She can then with all propriety and conscious pride celebrate the semi-centennial of

[1] See Bigelow on "Discovery of Anæsthesia," in Century of American Medicine, Philadelphia, 1876; and Lyman on "Artificial Anæsthesia," New York, 1881.


MASSACHUSETTS GENERAL HOSPITAL 1811
COMMEMORATION
of the
Fiftieth Anniversary
of
The First Public Demonstration
of Surgical Anaesthesia
at the
Massachusetts General Hospital
Boston October 16th 1846.
The Honour of your Company is requested
October 16th 1896 at Ten o'clock
Wm Sturgis Bigelow
For the Trustees
J. Collins Warren
For the Staff

an event that connects her name indissolubly with the greatest boon that has yet been vouchsafed to man.

The notable gathering that will be present October 16 in that now famous amphitheater, may be warm in their praises and oratory will no doubt be all that the occasion demands; but the larger amphitheater of the world, so far as inhabited by civilized man, will contain thousands of sympathizers with this movement whose sympathy, unwritten and unspoken though it be, will be as sincere and earnest as any. May prosperity continue to attend the Massachusetts General Hospital and its staff.

## PROPOSED LEGISLATION IN REGARD TO EXPERT TESTIMONY.

The unsatisfactory conditions that exist in regard to medical expert testimony, have been the subject of a vast amount of earnest thought and their discussion has occupied no inconsiderable space in medical literature, but as yet the questions that have been raised seem very far from a satisfactory settlement. That they are living questions of the day is sufficiently demonstrated by the contents of the last issue of the JOURNAL, which contained three valuable communications by leading men in our profession together with the equally able discussion that they incited. The views there enunciated are certainly worthy of respect and careful consideration, but as the discussion shows, the solutions offered of the actual difficulties are not in all ways acceptable. Reform of abuses in medical expert testimony as they exist in our present methods of judicial inquiry is most desirable, but no one seems to have yet discovered the universally applicable cure for these evils.

The favorite remedy just now appears to be that embodied in the different legislative proposals that have been put before the law-makers of the three States of New York, Illinois and Minnesota, viz., the appointment of a commission of experts by the judge or judges, either in each particular case or for a given period for all cases. This would undoubtedly improve matters, but is open to some very obvious objections. One of these is stated by Dr. SUITER; the law could not deprive the defendant of his right to call in additional evidence outside of the appointed experts and, if he had accepted these, it might put him in the position of combatting his own witnesses. Besides this objection which would occur to a lawyer, there are others equally apparent to a layman or a physician. The mere fact stated above that the defendant, say in a criminal case, can not be bound to confine his expert witnesses to the list approved by the judges, leaves open the possibility of nearly or quite all the abuses now complained of. His witnesses may be qualified or not, they may be pretentious quacks or they may outweigh as experts all the official appointees. There is no assurance that judge-appointed experts will always be really such; judges are fallible, and, as regards medical matters, often ignorant men; they may be influenced by prejudice, friendship, or partisanship, and in the present state of medical practice with the numerous schools not discriminatingly estimated by the laity, the very desire to avoid partisanship might cause a non-medical man or a body of such, to make injudicious or improper selections. An official position also, involving public consideration and compensation will be sought after by the unworthy, and too often, it may be, with success.

Allowing, however, for these imperfections, such an enactment as that pending in New York State would still do away with many of the objectionable conditions that now exist, and might well be welcomed. It creates no real standard, however, for an expert, and in this is its failure. The importance of this defect may be variously estimated, but in some respects it is a vital one, and how to avoid it is still a problem for consideration. Some provision in the law that no one shall be considered an expert and have his testimony received as such unless he can show that he has had actual experience in and has devoted a certain number of years to the study of the subjects in which he claims to be specially skilled, would perhaps best meet the requirements, and this could be brought in as a part of a bill fixing the minimum compensation for expert testimony by the State. This last, in view of some recent judicial utterances, would be an eminently desirable measure as making the State recognize the difference between the giving of opinions which are the expert's stock in trade and ordinary testimony. With such a provision in the law, also, we would not have the scandal of specialists in one department testifying as experts in another, a practice which has been unfortunately, to say the least, sometimes indulged in by men of reputation and ability, and otherwise unexceptionable medical practices. A jury of laymen is not likely to make distinctions between one man of reputation and another, and the law should not allow them to be misled in this regard by a lawyer's trick, even if men can be found willing to be his instruments. At present experts are allowed to estimate themselves and the result is often disastrous to them and to the general standing of expert testimony.

Medical expert testimony has probably suffered more from the present defects in the court practice than any other kind, and it is full time for the profession to exert itself in behalf of reform if only for the sake of its own reputation, which continually suffers under the present order of things.

**"The Atlanta Clinic"; Change of Management.**—With the September issue of that journal, the editor, Dr. Edward C. Davis, and business manager, Dr. W. L. Champion, retire from control. This step has been taken on account of the increased professional business preventing the proper attention to the details of the journalistic work. They will be succeeded by Dr. Lucien Lofton as editor and Mr. Ephraim Smith business manager.

## CORRESPONDENCE.

### The Spanish Language and the P.-A.M. Congress.

NEW YORK, Sept. 23, 1896.

*To the Editor:*—Several physicians who think of attending the Second Pan-American Medical Congress, to be held in the city of Mexico, if they could secure the services of a well known Spanish speaking physician to act as their guide and general translator, have asked me whether I am willing to go with them in that capacity. I replied that I have no objections, but in order that the number of physicians composing the party be still larger will you be so kind as to say a few words about this matter in the JOURNAL?

There are, no doubt a large number of professional gentlemen who would willingly go to Mexico, taking advantage of the reduction of the price of the trip for that occasion, if they could find some confrère thoroughly qualified to act as their *cicerone*. I remain sincerely yours,

DR. A. M. FERNANDEZ-YBARRA.

235 Thompson Street.

### Straw Charcoal with Boric Acid as an Antiseptic.

VALLEY CITY, N. D., Sept. 23, 1896.

*To the Editor:*—It may interest some of the JOURNAL readers to know that a mixture composed of one part, by weight, of muslin-sifted straw charcoal to two parts of powdered boric acid will heal old ulcers or wounds very rapidly; fresh cut or torn surfaces are healed as if by magic. This may be old to many of the profession, but I never heard of it until I used it. But even if old it may do no harm to remind all that it is a very valuable combination. Fraternally

F. H. DEVAUX, M.D.

## SOCIETY NEWS.

**The Central Medical Society of New York.**—This Society will meet at Rochester, N. Y., October 20. Sixteen central counties of the State are represented in the membership of this society, which meets annually, alternating between Buffalo, Syracuse and Rochester.

**The American Academy of Railway Surgeons.**—This society, after a very interesting and instructive meeting at Chicago, closed its third annual session September 25. Chicago was chosen as the meeting place for next year. The following officers were elected: President, L. E. Lemen, Denver; vice-presidents, M. C. M. Gardner of San Francisco, R. Ortega of Diaz, Mexico; secretary, D. C. Bryant, Omaha; treasurer, C. B. Kibler, Corry, Pa.; editor, R. Harvey Reed, Columbus, Ohio.

**Canadian Medical Association.**—This association has elected the following officers for 1896-97: President, V. H. Moore, Brockville, Ont.; vice-presidents: For Prince Edward Island, Peter Conroy, Charlottetown; Nova Scotia, J. F. Black, Halifax; New Brunswick, Thos. Walker, St. John; Quebec, J. M. Beausoleil, Montreal; Ontario, W. W. Dickson, Pembroke; Manitoba, R. S. Thornton, Deloraine; North-West Territory, E. H. C. Rouleau, Calgary; British Columbia, E. B. C. Hannington, Victoria; general secretary, F. N. G. Starr, Toronto; treasurer, H. B. Small, Ottawa. The place of meeting in 1897 will be Montreal, in conjunction with meeting of the British Medical Association.

**The Autopsical Society of Paris.**—This twenty-year old Society, known as La Société d'Autopsie Mutuelle, has grown so rapidly in membership that it now numbers about one hundred Fellows. They are nearly all, says the *Medico-Surgical Bulletin*, scientists of note, several of whom are women. It has for its purpose the placing of the brains of its members at the disposal of surviving members for examination and dissection. Fourteen brains, neatly catalogued, are now contained in a glass case at the end of the meeting room, and the fifteenth, which was during life the property of M. Abel Havelacque, rector of the Anthropologic Society, now rests immersed in alcohol on the table of the dissecting room, where the man's former associates will meet to weigh, probe, cut and discuss it.

**Association of Erie Railway Surgeons.**—The annual meeting was held at Lakewood, September 21. An accident occurred at the opening of the session which interfered with the pleasure of the gathering. Dr. John L. Eddy, of Olean, the president of the association, a well-known surgeon, stepped into an open elevator shaft and fell to the bottom, a distance of eight feet. He was at once removed to his room, where it was found that he had sustained a deep cut across the forehead, a badly sprained ankle and a severely bruised hip. On account of this accident to the president, the vice-president, Dr. Webb J. Kelly of Galion, Ohio, presided. Dr. S. Birdsall of Susquehanna, Pa., presented a paper on "Symes ankle-joint amputations;" Dr. F. W. Thomas of Marion, Ohio, "Injuries of the throat"; Dr. C. C. Kinnaman of Ashland, Ohio, "Symmetrical gangrene"; Dr. C. M. Daniels of Buffalo, chief surgeon of the Erie Railway, told about his relief and hospital organization scheme, as intended to be adopted by the company. Other papers were: "Traumatic spinal neurosis," by Dr. N. R. Harnden of Waverly, N. Y.; "Painful stumps after amputation," by Dr. C. B. Kibler of Corry, Pa.; "Railway shock," by Floyd S. Crego, of Buffalo; "Clinic review of cases the past year" by Dr. Thomas Manley of New York. The annual election of officers resulted as follows: President, Dr. Webb J. Kelly, Galion, Ohio: vice-president, Dr. F. W. Thomas, Marion, Ohio; secretary and treasurer, Dr. W. W. Appley of Cohocton, N. Y.

**Tri-State Medical Society of Alabama, Georgia and Tennessee.**—The eighth annual meeting will be held in Chattanooga, Oct. 13-15, 1896. The following partial list of papers indicates that the session will be of more than usual interest:

Convulsions in children treated with large doses of morphin. Y. L. Abernathy, Hill City, Tenn.

The therapy of antipyretics. P. L. Brouillette, Huntsville, Ala.

Cystitis; report of cases. D. S. Middleton, Rising Fawn, Ga.

A new splint for fractures below the surgical neck. G. A. Baxter, Chattanooga.

Humphrey's operation (amputation of the penis) with presentation of patient. Cooper Holtzclav, Chattanooga.

Diseases of the veru montanum (caput gallinaginis). W. Frank Glenn, Nashville.

Acute pelvic congestion. Valentine Taliaferro, Atlanta.

Operations for abscess of the liver. W. C. Townes, Chattanooga.

Treatment of pus in the pelvis. W. E. B. Davis, Birmingham.

Some remarks on syphilis. W. F. Westmoreland, Atlanta.

Observations on the treatment of specific and non-specific venereal ulcers. Wm. S. Goldsmith, Atlanta.

Bacteriologic data in the drainage of the peritoneal cavity. George S. Brown, Birmingham.

A statistical report of some of the more recent remedies used in the treatment of tuberculosis, and summary of recent preventive methods of value. R. H. Hayes, Union Springs, Ala.

The Turkish bath: its therapeutic indications. Louise Eleanor Smith, Chattanooga.

Microscopic and chemic aids to diagnosis. Katherine R. Collins, Atlanta.

Vaginal hysterectomy for bilateral suppurative processes of the uterine adnexa. W. D. Haggard, Jr., Nashville.

Some obstetric complications with report of cases. R. R. Kime, Atlanta.

Puerperal eclampsia. Searle Harris, Union Springs, Ala.

Puerperal eclampsia. J. E. George, Rockwood, Tenn.

Medicine; Hippocratic and operatic. John P. Stewart, Attalla, Ala.

Diseases and treatment of the accessory sinuses of the nose. B. F. Travis, Chattanooga.

Report of a case of bradycardia. W. C. Bilbro, Murfreesboro.

Paper on diseases of the eye. J. M. Crawford, Atlanta.

Paper on diseases of the eye. Alec Sterling, Atlanta.
The Woodbridge treatment of typhoid fever. J. W. Duncan, Atlanta.
Treatment of cancer of the skin. C. R. Achison, Nashville.
President's address; the Doctor of Medicine. J. B. Murfree, Murfreesboro, Tenn.

**College of Physicians of Philadelphia**—SECTION ON OPHTHALMOLOGY.—A meeting of the section was held March 17, 1896, Dr. Wm. F. Norris, chairman, presiding.

Dr. George C. Harlan exhibited a case of traumatic enophthalmia in a boy 5 years old, who five months previously was wounded by the horn of a bull. The right cheek and temple and the lower eyelid were lacerated, and the inferior margin of the orbit was chipped. There was complete ptosis. At the time of examination the tendo oculi was found to have been torn away and the lower lid was dragged downward and outward by the action of the orbicularis and the contraction of the cicatrix. The surgeon who attended the patient at the time of the accident reported that there was considerable orbital cellulitis with abundant discharge of pus from between the lids, but there never was exophthalmia. He thought that the cellulitis was confined to the lower part of the orbit. At present the eyeball is retracted and has the appearance of being very much smaller than its fellow. The cornea is situated five millimeters behind the plane of that of the other eye. There is scarcely more ptosis than would result from the depression and loss of support of the lid. When the patient looks directly forward the palpebral fissure is five or six millimeters wide. He insists that he sees well with the eye. Though the movements of the eyeball are much restricted no diplopia can be detected. There is complete inability to look upward beyond the horizontal line either directly or to the right or left. Horizontal movements are normal and the downward excursion is much exaggerated.

Dr. Charles A. Oliver gave the clinical history of a case of ciliary staphyloma and excavation of the optic disc following traumatic cataract in a boy 4 years old. The clinical picture of this case of complicated secondary glaucoma was complete. Unlike similar cases of sudden obstruction to proper lymph-stream circulation, there remained from the very first, as shown by the fields of vision, and as afterward proven ophthalmoscopically, an element that may possibly complicate many more cases of the traumatic type of this disease than is at present imagined, and that is retinal detachment. Again, the condition of the vitreous and its peculiarity of opacities, taken in connection with the history of the case, would tend to show that there was a hemorrhage into that humor which probably might have been recognized ophthalmoscopically had the patient been seen a week earlier. These, with a few certain evidences of a low grade iridocyclitis, made the case still more atypical. On the other hand, the progressive diminution of the field of vision; the gradual distension of the globe and the localized tissue-bulgings in the upper ciliary regions; the deep and characteristic cupping of the nerve-head; the reapproximation of the remaining areas of retinal detachment; and the late, fixedly increased intraocular tension all show the certainty of degeneration even in a young and yielding eyeball when such tissues are subjected to a persisting increased intraocular pressure. The case illustrates the results of two conflicting contemporaneous conditions produced by traumatism: localized inflammatory reaction and obstruction of lymph-stream circulation.

Dr. George E. de Schweinitz presented a "Further note on an unusual form of macular lesion following iritis." The patient, a woman 50 years old, recovered with a nearly normal sharpness of vision, but with some vitreous opacities from a violent attack of serous iritis. The eye remained comfortable for eight months, when she appeared with a positive scotoma and the ability to see to count fingers only when situated in the periphery of the visual field. In addition to the positive scotoma which the patient described as appearing "like a dinner plate with a green edge," there was a small absolute scotoma about the horizontal level. Ophthalmoscopic examination revealed an oval reddish area, giving the impression of a disintegrating hemorrhage and containing in the center several white dots situated exactly in the center of the macular region. Dr. de Schweinitz referred to the unusually distinct macular ring which seemed to indicate that there must be some thickening in the periphery of the hemorrhagic area.

Dr. Oliver exhibited a water-color sketch of a case of unusual submacular hemorrhage forming a part of some very curious lymph extravasations in the retina without any vitreous disturbances, found in the left eye of a healthy woman 65 years old, from whose eye he had successfully removed a black cataract by simple extraction about two months previously.

Dr. de Schweinitz gave the clinic history of a patient suffering from convergent strabismus of the left eye and a very high myopia 16 D. Ophthalmoscopically, the following lesions were presented. A small posterior polar cataract, numerous fine vitreous opacities, and a horizontally oval optic disc, of a greenish-gray color. The nerve-head was imbedded in the center of a huge mass of opaque fibers which followed the course of the principal vessels almost to the periphery of the eye-ground, in all directions, but less markedly downward and to the nasal side. A small patch in the macular region was not covered by the opaque fibers, but was disturbed by superficial choroidal changes. There was almost complete loss of nasal field, and of the entire center of the visual field, with exception of a small area to the nasal side of fixation, about 10 degrees in diameter, within which the white test object was dimly seen. Colors were correctly appreciated when held in the temporal field.

In the discussion, Dr. B. Alexander Randall showed a card-specimen of a case of retained nerve-sheaths in a case that had been sent to him for supposed intracranial disturbances. In this case there was an isolated patch situated in the macular region. Dr. Oliver exhibited the drawing of a case in which the medullation began at the edge of the disc and divided into two comet-like processes extending along the lines of the larger retinal vessels.

Dr. James Thorington, by invitation, exhibited an asbestos cover chimney with disc attachment for ophthalmoscopic purposes. The original form with the disc attachment he had made two years previously. The present arrangement showed that five changes could be made in the disc. 1. The one centimeter opening fulfilled all the purposes of the original chimney. 2. The two centimeter opening permitted greater freedom of movement on the part of the observer, without moving the light. 3. The three centimeter opening may be used as a source of light for the concave skiascope, or for the ophthalmoscope, otoscope, etc. 4. A round section of cobalt blue glass for the chromatic aberration test of ametropia had been added, as likewise: 5. The perforated disc with perforations and spaces each 1.45 millimeter to test for astigmatism at one meter's distance.

Dr. Thorington showed a new form of perimetric lenses which received its name from the fact that their optical center corresponds to the points of fixation in the fields of vision. The reasons given for the recommendation of the lens, were, that it gives to the eye that form of lens which is consistent with a normal form of the visual field; it removes the edge of the lens to a sufficient distance so that the edge can not be seen to any great degree while the eye is fixed straight ahead; and that bifocal segments can be made much larger. He stated that the increase in weight need rarely exceed the ordinary form, twenty-five to thirty grains; the large size does not attract much attention; and the cost will remain the same as in the ordinary styles used. Upon account of necessary greater weight and thickness, he believed that this form of lens can not be used

for cases of aphakia and high myopia, but showed that as this class of cases constitutes much less than one-half of all refraction cases (37 per cent.), the lens will be accepted in the majority of instances.

Dr. Oliver exhibited and demonstrated a series of microscopic specimens showing the various forms of eyes seen in fish, reptiles, birds, quadrupeds, and man. He showed the marked differences in the conditions of the dioptric media; the varying shapes of the eye-ball; the relative positions of the eye in the head of the animal; the adaptations for near- and for far-focusing; the arrangements for increase of the interior illumination; the positions and peculiarities of the nerve structure; and the relationship existing intra-cranially between the two organs, in the aquatic, the terrestrial and the aerial forms of animal life.

## PUBLIC HEALTH.

**California's Mortality Report for August.**—Reports from fifty cities, towns, villages and sanitary districts, aggregating a population of 739,132, show a mortality of 865—a death rate of 1.17 per thousand for August, 1896, or 14.04 per 1,000 per annum.

**Isolation of Lepers in Russia.**—A "leprosorium" has just been completed at Wenden, and Virchow congratulating the Society for the Prevention of Leprosy during his recent visit to Russia, remarked that they had accomplished in this isolation of the lepers more than the most powerful of the popes had been able to effect in the days of their greatest supremacy.

**Horse-meat Consumption in Paris.**—There are at least two hundred horse butcher shops in Paris. The first one dates from July 1, 1866, since when the consumption has grown continuously. In 1872, 5,034 horses were eaten in Paris; in 1878, 10,000; in 1894, 21,227; in 1895, more than 30,000.

**Mortality Report of Connecticut for August.**—There were 1,644 deaths reported during the month of August. This was 33 more than in July, and 293 more than the average number of deaths in August for the five years preceding the present. The death rate was 23.6 for the large towns: for the small towns 21.6 and for the whole State 23.

**Typhoid Fever in the Navy.**—Surgeon C. A. Siegfried, of the battleship *Massachusetts*, reports that on August 31 he was compelled to transfer from the vessel to the Brooklyn Naval Hospital the fifth case of typhoid fever that had occurred aboard since she was commissioned at League Island in June last. The surgeon is reported as saying that he attributes the disease to the bad drainage of Philadelphia, and the condition of that part of the city nearest League Island.

**Quarantine Station for Northern New Jersey.**—Dr. A. H. Doty, Health Officer of the Port of New York, has applied, through Dr. H. C. Herold, the Health Officer of Newark, to Governor Griggs of New Jersey, for the establishment of a quarantine station at Perth Amboy. While all vessels that come to New York are obliged to stop at the boarding station of the quarantine office on Staten Island, they can land at Perth Amboy without interference, and there is therefore danger of contagious disease being spread from that point. Governor Griggs, it is reported, will recommend such a health station in his next annual message to the Legislature. In the meanwhile he has promised to use a $10,000 emergency fund which is at his disposal for the suppression of any outbreak of disease, should the occasion arise.

**A Society for the Prevention of Noise.**—The formation of such a society is suggested in the *North American Review* by Dr. J. H. Girdner. He contends that there is as rightful need for such a society as for the Society for the Prevention of Cruelty to Children. It is, indeed, for the prevention of cruelty to grown people. The continued concussion of noise on the auditory nerve is injurious to the whole nervous system, and is a great contributing element to the nervous prostration so common among city dwellers. It is a well-known fact that one coming from the country is almost stupefied by the multitude of sounds in a great city. The city man is used to it, but it is at the expense of vital force, and he undergoes, unconsciously, a strain that is great and wearing. Dr. Girdner's view is that a man has as much right to legal protection against an assault on his auditory nerves by useless noises as he has against an assault on his nerves of touch, by being whipped or beaten in any way.

**Improvements at the New York Quarantine.**—Dr. A. H. Doty, health officer of the port of New York, is commended by the *Medical News*, August 29, for the great degree of efficiency that has signalized his tenure of office. One of his innovations is the wearing of a uniform by himself and his deputies when they are "on duty." The uniform is a badge of authority especially impressive, normally so we might say upon the foreign element that visit these shores for the first time. New headquarters are in course of construction, a part of which will be devoted to a bacteriologic laboratory. This laboratory is already fully equipped and ready at a moment's notice to undertake the diagnostic confirmation of suspicious cases, so that a few hours of delay, while the investigation is being made, enables the health officer to determine on a scientific basis, whether a ship must be detained at quarantine or be allowed to proceed. "This fact is not usually appreciated by the general public, and the solution of this question of delay by the present health officer certainly reflects the greatest credit upon him. If a ship arrives after sundown, instead of being obliged to lie at anchor for the night in the lower bay, she is inspected at once and allowed, if in a suitable condition, to proceed to her berth. If there are immigrants or others requiring individual inspection, an electric search-light is set up upon the deck, and under its powerful beams the inspection is satisfactorily accomplished. If the passengers or cargo require disinfection, the boat, which the health officer has just had constructed, will accomplish it *tuto, cito et jucunde*. A row of bathrooms on either side of the boat will quickly disinfect eight persons by spray or vapor, or both. Clothing, bedding, etc., is all disinfected by steam, *in vacuo*, in a great car, such as is in use by the city Board of Health. The cargo itself is disinfected by sulphur gas, which is carried from the disinfecting boat in pipes under pressure, and distributed where needed, as water is distributed with hose. Thus, a ship, her cargo and her crew, coming from an infected port could, in a few hours, be sent into the harbor with a clean bill of health, the safety of the public being assured and the rights of the shipping-master protected as well. Surely this is a prodigious advance over old methods. Should a ship come to our shores, containing many cases of infectious disease—cholera, for example—there would be no long and vexatious detention of the well and clean, together with the sick. The former, after disinfection, would go on their way, and for the latter the health officer has provided large and commodious barges anchored near the quarantine islands, isolation being thus complete and the conditions as favorable as possible for recovery. It is to be hoped that this system may not require the severe test of experience, but if it should, we see no reason to doubt its efficiency. If successful, it would redound primarily to the great credit and praise of the present health officer; it would also be a demonstration to the public that its safety in sanitary matters depends largely upon the endorsement and support of the medical profession."

**Typhoid Fever at Albany, N. Y.**—The *Bulletin* of the North Carolina Board of Health, August, gives a résumé of some recent studies on the subject, "Does Good Water Pay?" The writer takes for an object lesson the state of affairs that exist at

Albany, N. Y., a city whose water supply is taken from the contaminated Hudson River. He quotes the statements of Professor Mason of the neighboring city, Troy, to show the economy that might be exercised by officials in curtailing the expense account inevitably incident by that water-borne zymotic disease, typhoid fever. What is the tax levied annually by that fever upon a city of 100,000, for instance Albany, N. Y. From statistics given in the five last annual reports of the State Board of Health, the deaths due to typhoid fever in Albany average 75 for the year. Rating the money value of each life at $2,000, this death rate would mean an annual pecuniary loss to the city of $150,000. Funeral expenses are variously estimated at from $20 to $30. Should we accept the intermediate value of $25, this item would cause $1,875 to be added to the above sum, thus raising the total direct loss through death to $151,875. But typhoid fever does not always kill, its mortality rate is commonly quoted at about 10 per cent. For the present purposes should we assume nine recoveries for each death from the disease, and place forty-three days as the period of convalescence (the average of 500 cases at the Pennsylvania Hospital), we should have a term of 29,025 days as representing the time lost, per year, by the 675 persons who have the fever and recover. Thus an annual loss of over seventy-nine years has to be borne by the city's capital of productive labor. This great amount of enforced idleness, when translated into money value, should very properly be added to the death loss above estimated. Fixing the rate of wages at $1 per individual per day, a very low figure, considering that the bulk of typhoid patients are in the very prime of life, there is a loss of $43 for wages for each recovery, or a total yearly loss for the city from this item of $29,025. The cost of nursing and doctors' bills equals at least $25 per case, which is a very low estimate, thus adding the further amount of $16,875 to the gross sum. Expressed in tabular form, this yearly tax imposed by typhoid fever in Albany is given, and, upon a most conservative estimate, it is practically $200,000, which is $2 a year for each man, woman and child in the city, or a yearly tax of $10 for every family of five persons: 75 deaths at $2,000 each, $150,000; 75 funerals at $25 each, $1,875; wages of 675 convalescents, during 43 days, at $1 per day, $29,025; nursing and doctors' bills for 675 convalescents, at $25 each case, $16,875; total tax levied annually by typhoid fever upon the city of Albany, $197,775. It can readily be seen that public works which could eliminate a reasonable fraction of this great tax would pay for themselves in the course of a few years, even though they were originally expensive. Finally, it is right to inquire what fraction of the present typhoid loss it would be reasonable to hope to save if pure water should be served in the city in place of its present polluted supply. To answer this question, recourse must be had to statistics obtained from other cities, covering periods before and after better water systems had been introduced. Such data have been already given for a number of cities and communities, and it only remains to anticipate what will be later said of Munich, and state that improved water and sewerage have reduced the annual typhoid mortality from an average of 25.4 per 100,000 to 2.7. Surely pure water pays in a city with such a record, and likewise it would pay in the newer but growing cities on this side of the Atlantic. Americans insist upon being supplied with much more water per capita than is usually furnished for Europe, but they are singularly indifferent as to its quality. It would be a reform of great moment if they could be induced to curtail the present enormous waste of public water, such as that of Buffalo, for instance, which is stated to be 70 per cent. of the entire pumpage, and to spend the money thus permitted to leak away in a vigorous effort to improve the quality of the water. No such lowering of the typhoid death rate as occurred in Munich, San Remo and sundry other places, could be looked for, perhaps, but a large percentage of the present rate could be cut off, and we think, from a consideration of the above figures, that such a reduction would pay. No weight should be attached to the argument, so often advanced by the individual householder, that he and his family have used the water without evil results for the past fifty years. A single family is too small a collection of units upon which to base any estimate touching the question at issue. Placing the typhoid death rate for Albany, as above, at 75 annually, it would call for one death in a family of five persons every 261 years, a period much beyond the limit of ordinary family record."

**Vaccination in London Neglected; the Gloucester Epidemic Stamped Out.**—From the parliamentary intelligence reported in the London *Lancet* of August 22, we learn that in Gloucester, during the thirty weeks ending July 25, there were notified 2,008 cases of smallpox. That journal further states that "Gloucester seems to have got rid of the disease and to be able to chronicle a clean sheet so far as smallpox is concerned, after suffering 2,000 attacks within a period of about ten months. The bitter lesson taught by this epidemic is not likely apparently to stem the tide of opposition to vaccination wherever antivaccinationists congregate. Proof of this has been seen quite recently in the parish of Islington, in the different attitude of the vestry, who, as a health body, are desirous of seeing the vaccination acts enforced, and of the so-called vaccination authority, to wit, the poor-law guardians, who are wilfully ignoring the voice of the vestry; not only so, but the guardians also decline to hear what the public sanitary officers of the parish have to say on the health side of the question. The only consolation to be derived is to suppose that the reign of the poor-law administrators is probably short-lived now, and the sooner the bodies charged with safeguarding the public health have a voice in the matter the better will it be for all concerned." In another paragraph the same journal makes the following reference to to the closing up of the epidemic at Gloucester, and to the expenses borne by its citizens on account of that epidemic: "The Gloucester sanitary committee have, it appears, discontinued the issue of weekly statements as to smallpox occurrences, the health of the city being deemed to approximate now to its normal condition. It would seem that the expenses connected with the recent epidemic, so far as the guardians are concerned, have been about $10,280, and that it has been decided to ask the local government board to sanction the raising of a loan to meet the case. It will be interesting to know what is the sum total to which the citizens will have to subscribe in respect of the epidemic in all its bearings. The expenses appearing on the books of the town council will, however, we imagine, go but a very little way toward the whole, as the amount of money which must of necessity have been expended in one way and another by the public in matters of a personal character but having direct relation with the prevalence of smallpox in the town, must have been excessive. We know that charitable contributions were made with a liberal hand."

**A Less Stringent Quarantine for Diphtheria.**—The *Archives of Pediatrics*, in an editorial paragraph, commends the considerate courage of the New York City Board of Health in adopting a change, not of the highest moment but of importance as indicating a spirit of concession. The regulations have been by some considered unduly harsh and arbitrary and as trenching upon the patient's personal liberty. It further says:

"There was a growing tendency to postpone the sending of cultures through the fear that patients who might suffer from very mild attacks of diphtheria might be made prisoners for days or weeks after every symptom of disease had disappeared. That experience is not a pleasant one to the family physician. It was questioned whether the board of health was warranted in depriving citizens of their liberty unless they were able to say that the bacilli discovered in the throat, weeks after an attack of diphtheria, were virulent. It seemed doubtful to

many men of large experience whether the scientific evidence yet available warranted such rigid measures. The present regulations will certainly commend themselves to the practitioner. They prohibit any person known to have Löffler bacilli on their mucous membranes from attending school or mingling in other public assemblies where innocent and unsuspecting persons may become infected. Provision is made for informing every family in which diphtheria occurs regarding the method of its propagation and the dangers which may follow from contact with those who are known to carry the germs in their throats. This knowledge having been furnished the patient and the attending physician are privileged, under certain limitations, to assume any responsibility and risk which may arise from the violation of quarantine. This action is unquestionably wise. It removes the chief objection which has been raised against sending cultures to the board of health. It will undoubtedly encourage the earlier sending of cultures, and hence the earlier and more accurate diagnosis of diphtheria, and would seem to sufficiently guard the public interest. The endeavor made during recent years by the Board of Health of New York to aid the physicians of the city in their battle against disease can not be too highly commended. The willingness also exhibited to correct errors and to render necessary regulations as little irksome as possible, is worthy of equal commendation."

**Sanitary Rules for Schools in Indiana.**—The Indiana State Board of Health has issued the following letter of explanation in relation to the opening of the public schools for the fall term:

"Simultaneously with the annual opening of the public school, diphtheria, measles, mumps, scarlet fever and many other diseases usually increase. This is caused by the congregating of the pupils. They mass together and contact spreads infection. Some few pupils may have just recovered from a communicable disease, or they may be from families that have been smitten and, being infected, they transmit disease to those who are susceptible. It is reasonable to assume that the suddenly imposed confinement in the school after a period of freedom frets the children for a few days, causing more or less nervousness and so resistance is temporarily lowered. In this way susceptibility may be increased, and sickness may more readily follow. To do all that is possible to prevent the usual school-opening increase in illness is the object of these rules.

"It is ordered in the rules that desk tops and banisters be washed with soap and water and afterward treated with a disinfectant. This is required because it is more probable that disease germs are planted upon exposed desk tops and banisters by infected persons, and being transferred by the children's hands to their mouths, disease results. The washing and disinfecting will do much to prevent infection from this source.

"Open water buckets and large tin cups are condemned because the dipping of water with cups, which are used by many, introduce spittle into the supply; and beside, open buckets catch dust and dirt. Diphtheria, diarrhea, sore mouth and other complaints have been transmitted in this way. This source of disease may be avoided to a considerable degree by supplying a covered tank with a large, free-flowing faucet and a small cup. The opening of a large faucet will furnish a strong stream, which will suddenly fill the cup and wash the saliva from the edge. Ample drainage must be provided for carrying away the waste water.

"Slates are condemned because of their uncleanliness. Writing and figures being obliterated, as they frequently are, with spittle, and as the damp slates readily collect dust, the danger of transmission of disease in this way is very great. Small children generally place pencils and pens in their mouths, and if these articles are promiscuously distributed without being sterilized, as the rules direct, infection may result. The collection of pencils seems necessary to always insure one to each pupil.

"Spitting is prohibited because it is a possible source of disease, is filthy and is unnecessary.

"These rules may seem trifling and unnecessary to those who have not given consideratian to modern sanitation, but the teachers more than any other public officer may secure the physical well-being of the pupils as well as the intellectual advancement.

"It is hoped that all the school authorities of the State will promptly enforce these rules.

"DOUGLAS C. RAMSEY, M.D., President.
"J. N. HURTY, M.D., Secretary."

COPY OF RULES ISSUED.

RULE 1. All teachers of public, private and parochial schools, all county, city and town health officers and all school authorities shall refuse admittance to the schools under their jurisdiction of any person from any household where contagious disease exists, or any person affected with any evident or apparent communicable disease, or any person who may recently have been affected with diphtheria, membranous croup, scarlet fever, whooping cough, contagious skin disease, measles or other communicable disease, until first presenting a certificate signed by a reputable physician stating that danger of communicating such disease is past, and said certificate is approved and indorsed by the health officer in whose jurisdiction the person may reside.

RULE 2. All teachers of public, private or parochial schools shall refuse admittance to their schools of filthy or unclean persons.

RULE 3. All school commissioners, school trustees in cities and towns and township trustees shall have the school houses under their control put in sanitary condition before school is opened and kept so throughout the year. Floors shall be scrubbed, windows cleaned, desks and all woodwork washed with soap and water and treated with a disinfectant. Windows shall be in repair, so that ventilation may be made perfect. Heating apparatus shall be efficient and in good order and dirty walls and banisters made clean. Banisters and tops of desks shall be washed with soap and water and treated with a disinfectent once each week.

NOTE. The disinfectant for treating desk tops, banisters, etc., and for use in urinals and closets may be cheaply made by the following formula and kept on hand in any quantity desired. To make ten gallons: Chlorinated lime, 40 ounces; soft water, 10 gallons. Thoroughly stir together and let stand until clear. The undissolved lime will fall to the bottom and the clear supernatant liquid may be used on the desks, banisters, baseboards, etc. The fresh milky mixture, as well as the creamy sediment may be used in urinals, closets and sinks. This disinfectant is not poisonous or dangerous. Chlorid of lime of the best quality may be purchased in quantity for 5 cents per pound. The cost of the disinfectant is, therefore, less than 2 cents per gallon. The use of all patent or secret disinfectants is discouraged by the State board of health.

RULE 4. School commissioners, school trustees in cities and towns and township trustees shall provide small drinking cups not to hold over a gill. Buckets or pails to dip from are condemned, and reservoirs or tanks of ample size having large, easy acting, free flowing faucets shall be provided. When water is drawn direct from public water pipes or pumps, reservoirs or tanks are not required. Ample drainage facilities for waste water shall be provided and the pupils directed to allow the cups to flow over when water is drawn. Drinking cups shall be cleaned and sterilized daily.

RULE 5. Slates are condemned. Paper tablets or pads shall be used instead. Riveted metal boxes of tin or galvanized iron with hinged covers and of proper size shall be provided for each school room. These are to receive pens or pencils, which must be collected from the children each day, and shall not again be distributed until box and all have been sterilized by heating in an oven at or above boiling heat for one-half hour. School commissioners and school trustees in cities and towns and township trustees are directed to enforce this rule.

RULE 6. Heating and ventilating shall be looked after with great care. Every school room shall be provided with a thermometer and a temperature not exceeding 75 degrees Fahrenheit nor less than 65 degrees be maintained during school hours. School commissioners, school trustees in cities and towns and township trustees are directed to enforce this rule.

RULE 7. Janitors when sweeping shall use damp sawdust or slightly sprinkle in order to prevent dust. Dusting shall be done with damp cloths. School commissioners, school trustees in cities and towns and township trustees are directed to enforce this rule.

RULE 8. The water supply shall be pure and wholesome, and closet or privy facilities shall be unobjectionable. School commissioners, school trustees in cities and towns and township trustees are directed to enforce this rule.

RULE 9. Spitting on the floor of any school building is absolutely forbidden. Teachers and all school authorities are directed to enforce this rule.

DOUGLAS C. RAMSEY, M.D., President.
J. N. HURTY, M.D., Secretary.

## NECROLOGY.

WILLIAM TURNER WOOTON, M.D. (Department of Medicine, University of Pennsylvania, Philadelphia, 1846), at Frederick, Md., September 14, aged 74 years. He was a member of an

old and distinguished Maryland family, was born in Montgomery County, but had practiced medicine in Frederick nearly all his life. Dr. Wooton was a frequent contributor to leading medical journals.

JOHN LAWRENCE DAWSON, M.D., at Charleston, S. C., September 17. He was born at the celebrated Mitkin plantation, near Monck's Corner, in 1815. Was the son of Lawrence Monck Dawson and grandson of a daughter of Lord Proprietor Monck. He graduated from the Medical College of the State of South Carolina, Charleston, in 1836.

After leaving the Medical College Dr. Dawson went to Paris with Dr. Chazal and spent some time studying and visiting the hospitals. Returning to South Carolina he located in Summerville. After a year or two, however, Dr. Dawson returned to Charleston. For some years he was United States physician to the Arsenal garrison, city registrar and health officer, holding the offices simultaneously. It was during his occupancy of these positions, in about 1840, when with the late Dr. Henry W. DeSaussure, he brought out the census of Charleston, which has been used as a standard authority since. Dr. Dawson joined the State Medical Society in 1837 and was prominent in its deliberations. He was a member of the standing committee, and also treasurer of the Society for the relief of the Families of the Diseased and Disabled Indigent Members of the Medical Profession of the State of South Carolina, an organization of which he was one of the founders.

P. F. BEVERLY, M.D., at one time President of the Ohio State Medical Society, at Columbus, Ohio, September 18, from a stroke of paralysis, the third one in a year. Dr. Beverly was 69 years of age, and a graduate of Starling Medical College, Columbus, Ohio.

CHARLES BERNACKI, M.D., of New York City, at Schandau, a Saxon watering place, September 17, aged 84 years. He was born at Starascol, Galicia, studied medicine in the University of Vienna and, after some practice in military hospitals in Australian Poland, opened an office in Vienna. After the political disturbances of 1848 he fled to America. From 1846 he was medical director of the Germania Life Insurance Co.

J. C. SACKVILLE, M.D., of Washington, Pa., aged 82. He was struck by a Baltimore and Ohio train September 23, and instantly killed. Dr. Sackville was a cousin of Lord Sackville West, formerly English ambassador at Washington, D. C., and a brother-in-law of the English poet, Robert Carr Foster. He graduated from the Royal College of Surgeons, London, England, in 1838.

EDWARD BENKENDORFF, M.D. (Medical Department, Washington University, St. Louis, Mo., 1847.) He was a native of Prussia. A relative of the same name is lord chamberlain to the czar.

H. H. HUNT, M.D., at Independence, Iowa, September 25, aged 72 years. He was county coroner for thirty years and was also a surgeon in the late war.

WILLIAM H. PERKINS, M.D., Long Island College Hospital, Brooklyn, N. Y., at Hancock, Md., September 11.——P. S. McArthur, M.D., Geneva Medical College, Geneva, N. Y., 1847, at La Crosse, Wis., September 19, aged 74 years.

## MISCELLANY.

**Treasurer's Notice.**—The Treasurer has received $5.00 in currency from Buffalo, N. Y., which he will properly credit if the remitter will send in his name with date of remittance.

**Dartmouth Medical College.**—William Thayer Smith, M.D., of Hanover, N. H., has been appointed dean of Dartmouth Medical College, to fill the place of the late Dr. Carleton P. Frost. Dr. Smith has been professor of physiology for a number of years. Prof. Gilman Frost has been appointed secretary and treasurer.

**Professor Virchow's Birthday.**—A cablegram states that great preparations are being made for the birthday of Professor Virchow, which occurs October 13. Scientists from all parts of the world, including the United States, will be present with gifts and congratulations.

**Mutilation of Prisoners in Abyssinia.**—The Italian government recently sent an artificial-limb maker to Africa to supply hands and feet to about two hundred and fifty native soldiers who had been captured by the Abyssinians and, after having each a foot and a hand cut off, were set free again, but the unfortunates who have been evirated can find no instrument maker to come to their relief. Evisration is a cruelty much practiced by the Abyssinians on their Italian prisoners.

**International Scientific Language.**—In letter a written before his death by Prof. Billroth to Dr. Jankau he remarks: I recommend the simplest of the Latin languages, Spanish, for an international scientific language; after this would come Italian and French, and among the Germanic tongues, English alone. English might even be preferable to all others, as it is one of the simplest. But as the Latin races have no aptitude for acquiring foreign tongues, it is necessary on account of their great talents in scientific matters, to make this concession to them, and select one of the Latin tongues for the international language.—*Gaz. Méd. de Paris*, August 29.

**Toxicity of Gastric Juice in Epileptics.**—Agostini has found that the gastric juice from an epileptic injected into the abdomen of a rabbit proves fatal with general toxic and clonic convulsions, especially if withdrawn immediately before or after an attack. Gastric juice from a normal person injected in the same way does not produce any evil effects. He considers these facts a valuable indication for the successful therapeutic treatment of epilepsy, with systematic rinsing of the stomach, disinfection of the intestines, etc. He found that the toxicity was diminished by the administration of bromids.—*Cbl. f. Phys.*, August 22.

**An Ancient Russian Superstition.**—A fatal case arising out of the widespread superstition that a candle made from human fat bestows invisibility upon its possessor, is reported from Ostrogozhsk. Two Russian thieves of the district were so firmly persuaded of the truth of this that they murdered a youth of their village in order to procure the candles in question. Having cut open the body, they removed the fat surrounding the kidneys, and, placing it in a tin box, took it home. There they proceeded to melt the fat over the fire. Unluckily for them an old woman, their housekeeper, became suspicious and informed the authorities. Her statement, coupled with the mysterious disappearance of the youth, who was a handsome and a popular young fellow of 18, led to the prompt arrest of the ruffians and their ultimate trial for the murder. The body was discovered, and the portions lacking therefrom lent further confirmation to the crime.

**Can Commit to Insane Asylum.**—The supreme court of Louisiana holds, in the case of State v. Uniake, decided June 30, 1896, that where a party has been indicted, and his counsel suggests his insanity, before trial, and a commission is appointed to inquire into his mental condition, and reports him to be insane, and the jury returns a verdict accordingly, and the judge of the criminal district court remands him to the parish prison, without a commitment to the insane asylum, the judge of the civil district court has authority, under section 1768, Revised Statutes, to inquire into the facts and circumstances of the case, and if, in his opinion, he is dangerous to the citizens and the peace of the State, to commit him to the insane asylum of the State.

**Right to Have Examination made by Female Physician.**—Under the provision of the New York Code that if a female plaintiff be subjected to a physical examination she shall have the right to have such examination made by a female physician, a decision

was called attention to in the JOURNAL of June 20, page 1245, to the effect that the fact that the order compels her to submit to an examination by a physician not of her own sex, is not a ground for the vacation of the order, she not having made any effort to have the order modified. But the appellate term of the supreme court of New York, first department, takes a different view of it, as its decision of July 27, 1896, in Lawrence v. Samuels, shows. It holds that the provision in question is for the protection of female suitors, and that the plaintiff in this case was entitled, as of right, to have inserted in the order the provision that a female physician make the examination, without making any special application for it as a favor or privilege, and that, in so far as the order appealed from a male physician named, it must be reversed, with liberty to the defendant to apply to the court below for the naming of such a physician as the Code authorizes.

**Effect of the X Ray on the Skin.**—We have seen it clearly demonstrated that the ray has an effect upon the skin, but only after frequent and long exposure to its influence. The appearance of the skin strongly resembles severe sunburn, with the accompanying pain, swelling, blistering and discoloration. The congestion in the hand is very marked, and the hand hanging in the usual dependent position occasions great pain. We have under observation at present a case in which the long exposure to the X ray has produced these symptoms, other exciting causes being positively excluded. The face showed the same series of changes as the hands.—*Canadian Pract.*, September.

**Woman's Inferior Sensitiveness to Pain.**—Ottolenghi reports in the *Cbl. f. Nerv. u. Psych.*, No. 7, that he has been testing with Edelmann's faradimeter the sensitiveness to pain and the endurance of pain in 682 women. He finds that women are less sensitive to pain than men, and that this sensitiveness is less in early life, increases to the twenty-fourth year, and decreases after that. The higher classes are most sensitive, and degenerates the least. He found the latter very obtuse to the sensation of pain. Endurance of pain varies between much broader limits in women than in men, reaching a maximum far beyond the masculine limit, possibly due to great "suggestibility" of the female sex. "General sensibility" reaches the highest point in the nineteenth year. He concludes from his investigations that sensitiveness to pain stands in close relation to the "psyche," while "general sensibility" depends upon the peripheral nerves. He consider woman's comparative insensibility to pain as a sign of her inferiority to man, as the uncivilized and degenerates are the least sensitive. He also attempts to prove a connection between this characteristic and her longevity.—*Cbl. f. Phys.*, August 8.

**Might be Entitled to Accident Insurance.**—A physician was insured "against bodily injuries sustained through external, violent and accidental means." While he was in his carriage on the highway, he attempted to administer to himself in his leg, for extreme exhaustion, medicine with a hypodermic needle. His carriage suddenly started, causing him to accidentally insert the needle deeply into his leg. This, he alleged and testified, produced blood poisoning and suppuration. The physician who attended him recognized it as a case of cellulitis, with which the morphia used had nothing whatever to do, and which resulted from the introduction of the needle, together with some condition of the skin or needle. Five judges of the appellate division of the supreme court of New York heard arguments on appeal from a judgment dismissing on the merits the complaint in an action against the company which issued the policy of accident insurance, with two of the five dissenting that judgment is reversed and a new trial ordered. The court holds, Bailey v. Interstate Casualty Company, decided July 7, 1896, that the question whether the injuries complained of were sustained through external, violent and accidental means, within the meaning of the policy should have been submitted to the jury. If, in the use of the needle, an agency that otherwise would not have been in force, and which was the efficient cause of the injuries, was accidentally set in motion, it says that it sees no good reason why it might not be found that the injuries were attributable to the accident as the sole and proximate cause. As to the contention that the diseased condition of the leg arose from the use of morphin, and therefore within one of the conditions of the policy that upon the evidence it also holds was a question of fact for the jury to determine.

**Regents Control.**—The supreme court of Michigan holds that the constitution of that State gives the control of the University of Michigan to the board of regents, and that the legislature has no control over the university or the board of regents. On this ground it holds unconstitutional Act No. 257, Laws 1895, wherein the legislature provided that the board of regents should establish a homeopathic medical college as a branch or department of the University at Detroit and should discontinue the homeopathic college now maintained at Ann Arbor as a branch of the university, and transfer the same to Detroit. In consequence, it denies a writ of mandamus, which was asked in Sterling v. Regents of the University of Michigan, decided July 28, 1896, to compel action on the part of the board in accordance with the legislative will. It also suggests that the attorney general is the proper party to move in such a case, and a private citizen does not possess the right, without permission of the court, to apply for this writ to compel a public board to perform an omitted duty.

**The Use of Oxygen After Ether in Surgical Operations.**—Dr. William A. Morrison, of East Boston, Mass., relates several cases in the *Boston Medical and Surgical Journal* in which inhalations of oxygen most effectually and rapidly remove the unpleasant after effects of ether. From these cases he concludes: 1. That some cases receive much more benefit from its use than others. 2. That in the most favorable cases astonishing results follow; the nausea is apparently relieved or prevented, consciousness is quickly recovered, the breath is entirely deprived of the odor of ether in a very short time, and the feeling of malaise, so frequently complained of, is absent. 3. That some cases are not benefited (or are positively harmed) by its use. In another case of his, a man with a gangrenous foot, convulsions appeared soon after inhaling the gas, and he was therefore obliged to discontinue its use. He is unable to state why the man did not tolerate it. 4. That the best method of administering oxygen after etherization is by the use of a soft-rubber catheter gently introduced into the nares until the eye of the catheter is approximately opposite the opening in the trachea. It seems to him desirable that all cases in which oxygen has been used after etherization should be reported, so that the profession should be assisted in determining what cases are likely to be benefited by the inhalation, and in what cases its use is contraindicated. This was recommended by Professor Jackson when ether was first administered.

**Liability for Harshness in Examination.**—In the personal injury case of Goodhart v. Pennsylvania Railway Company, which was decided by the supreme court of Pennsylvania, July 15, 1896, it says that the evidence in regard to the examination made by a physician on behalf of the defendant was not directed to the extent of the plaintiff's injuries, but to the severity of the examination. Its evident object was to persuade the jury that the character of the examination and the conduct of the physician in question and his assistants was unnecessarily harsh and annoying, and was a proper subject to be considered in assessing the plaintiff's damages. But the supreme court holds otherwise. It says that it must be borne in mind that a

claim was being made against the railroad company for damages based upon an alleged injury received in consequence of an accident on its line. In order to determine intelligently the extent of its liability, it was important for the defendant company to know the nature of the injury, and the extent to which the plaintiff was affected by it. This could only be known as the result of a medical examination made by competent and experienced physicians. The physician above referred to and his assistants were selected as proper persons to make the examination, and advise the company of their estimate of the plaintiff's condition, and its consequent liability. If, in the discharge of their professional duty to their employer, they went beyond what was reasonably necessary and employed methods and tests that were cruel, and such as the judgment of the medical profession does not approve, and thereby inflicted injury on the plaintiff, the supreme court holds that they were liable for their own trespass, whether committed with malice or through ignorance. But rudeness and incivility in the manner in which the examination was conducted, if rudeness or incivility can be affirmed of anything that was said or done in that connection, the court insists could throw no light on the extent of the injury actually suffered by the plaintiff, and the evidence referred to should have been rejected. Damages for a personal injury, it says, consist of three principal items: 1. The expenses to which the injured person is subjected by reason of the injury complained of. 2. The inconvenience and suffering naturally resulting from it. 3. The loss of earning power, if any, whether temporary or permanent, consequent upon the character of the injury—each of which elements it further discusses.

**Specific Immunity Versus Transient Protection in Cholera and other Infection Processes.**—Dr. Pfeiffer in a *Deutsche Medicinische Wochenschrift*, April 11, having been employed in an inquiry concerning the different kinds of immunity that can be effected in the laboratory, offers the following as a part of the results of his investigations upon the subject of immunity: The cholera poison is contained in the body substance of the cholera vibrio, so that dead, as well as living cholera bacilli show marked toxic properties. The cholera poison becomes capable of absorption by the disintegration of the cholera bacteria; analogous conditions have been established as regards typhoid fever, anthrax, chicken cholera, staphylococcus infection, and apparently influenza. Animals may be rendered immune to toxic doses of living cholera spirilla, and typhoid bacilli by previous treatment with various substances of bacterial and non-bacterial origin. This protection is transient, and does not depend upon specific changes in the fluids of the body, and is designated as resistance, in contradistinction to specific immunity. In the blood serum of human beings and animals that have been exposed to the action of the living or dead cholera spirilla or typhoid bacilli, there occur specific protective bodies, which are thus capable of rendering aid in differential diagnosis in cases in which ordinary methods have failed; and these substances may be made to accumulate in the blood in concentrated degree by properly conducted immunization. In their relation to chemic and physical agencies, they bear a close analogy with the antitoxins, from which, however, they are differentiated by their action. While the antitoxins occupy a specific relation to certain poisons, and are capable of destroying these in the animal body, the anti-bodies of cholera and typhoid fever are incapable of thus acting upon the poison of typhoid bacilli and cholera spirilla. Their activity consists in the destruction of the bacteria, but this property makes itself manifest, as a rule, only in the body, and is capable of demonstration outside the body only under special circumstances. These anti-bodies are also found, though in small quantities, in the normal blood of animals and human beings. They are neither bacterial products deprived of virulence, nor combinations of these with components of the immunized organism, but they are probably entirely new substances resulting from the specific reaction of the body to a specific irritant. The evidence points to the view that the anti-bodies are specific ferments. It is possible that the antitoxins also are specific enzymes. As fermentative activity plays an important part in the production of natural immunity, it is possible to relate natural and acquired immunity, antitoxic and bactericidal functions to a common general principle. This report as will be seen, fully sustains the position assumed by this JOURNAL in an editorial entitled the "Failure of the Antitoxins."

**A Question of Implied Contract.**—The defense to an action brought to recover for medical services rendered the daughter of the party sued was that the plaintiff was not in active practice at the time such services were rendered; that plaintiff was closely related to the family of the defendant by consanguinity and affinity, and the families were upon the most intimate terms; that for thirty or forty years plaintiff and defendant extended hospitalities, courtesies and favors to each other in the way of kindnesses and substantial benefits, without charges or any kind of legal obligation from one to the other, and that a greater part of the time defendant made plaintiff's home a general stopping place for rest, recreation and refreshments, and it was at these times and on these occasions and under these circumstances that the plaintiff, as the defendant then thought and believed, acting as much or more in the capacity of a friend than as a physician, examined and prescribed for the family of the defendant when indisposed. The evidence both showed that the services of the plaintiff were rendered as stated in his account and that the relations existing between the parties was as stated in the defendant's answer, and that their conduct and transactions with each other were the same as alleged. On the trial the court gave a charge to the jury to the effect that, if the plaintiff's demand was just and due he would be entitled to recover, and, further, that if they did not believe such account was just and due, and was contrary to law and equity, then they should find for the defendant. The plaintiff asked a special charge upon the question of implied contract, which the court refused to give. Under the circumstances the court of civil appeals of Texas holds, Bonner, v. Bradley, decided June 13, 1896, the trial judge failed to properly charge the jury, and reversed the judgment which was rendered in favor of the defendant. It says that when services are performed at the request of a party, the law will imply a promise to pay the reasonable value thereof, unless such request be made and acceded to as a gratuitous favor, and that if, at the time the services were performed by the plaintiff, it was not the intention of the parties that charges should be made for such services, then the defendant would not be liable therefor.

**Twin Extra-uterine Pregnancy; One Fully Developed Fetus of Fifteen Years' Retention.**—The *British Medical Journal* quotes Dr. Folet, in *Annales de Gynécologie et d'Obstetrique*, regarding a case of the above nature. The patient, a Flemish woman, aged 49 years, had an abdominal tumor, dull, uniformly hard, devoid of all tenderness, movable in its lower part and extending three inches above the umbilicus, which was diagnosed as a fibroma, partially calcified, and abdominal hysterectomy decided upon. As soon as the abdomen was opened an edge of bone (one parietal overriding another) was felt through a moderately thick sac of supple tissue, and the diagnosis at once amended to one of extra-uterine pregnancy. The sac did not appear to contain any fluid; it was partially adherent to the abdominal wall, from which it had to be detached with caution; it had many adhesions to the intestines, which were easily separated by the fingers. Only one ligature was required and the tumor was only retained by its base, when with a circular rent it burst, and five-sixths of the sac came away with the contents, leaving a funnel

formed by the remaining sixth attached by its outer surface to the pelvic organs. In the interest of the patient no endeavor was made to determine the exact relation of the sac to its surroundings; the edge of the funnel was fastened by eight silk sutures in the lower part of the abdominal wound, a large drain wrapped in iodoform gauze inserted in the peritoneum and the remainder of the incision closed. Recovery was perfect. The temperature never rose above 37.5 degrees C. and in six weeks the cavity of the cyst was obliterated and the healing complete. The structure of the cyst seemed to show it to be a tubal one. It contained two fetuses, one (female) 46 cm. in length, with well formed nails, had lived to term; it was not, properly speaking, a lithopedion; the tissues, though dense, were supple and nowhere calcified, and on sections of thigh and arm the skin and muscles were recognized by the naked eye and microscope. The other fetus had died about the third month; the thorax and head were much compressed, but could be made out and the members were distinct. The cords of both ended at the lower end of the sac in a single placenta, the degenerated tissue of which was represented by reddish-brown matter like touchwood, and broke into flakes on the slightest traction. Some days after the operation it was ascertained through an interpreter, that sixteen years previous the woman had become pregnant, having before that had four children at term. She duly quickened but at nine or ten months had a false labor; blood and membranes came away and she had hemorrhage for six weeks. As she ceased to feel the movements of the child and nothing further happened, she persuaded herself that she had been mistaken, and that she had not been pregnant, the more easily because her abdomen diminished a little in size and her catamenia returned and continued until she was 46. A doctor whom she consulted two or three years afterward, while giving no definite diagnosis, deprecated any treatment. She was led to apply to Folet on account of repeated attacks of pain during the last year, probably due to the peritonitis which caused the intestinal adhesions.

**Medico-Literary Notes.**—A book by E. Bonavia, M.D., has just been issued by the Longmans, on studies in the evolution of animals, taking into account the markings of animals as well as their coloration.

Cruden labored nineteen years on his "Concordance to the Bible," and immediately after its publication was sent to an asylum. He never entirely recovered from the mental disease induced by this gigantic undertaking.

Dr. Conan Doyle lately confessed to the London Authors' Club that he first began to write to get a little money to pay some bills. For nearly ten years most of his manuscript came back to him by return of post. His first profitable article was for a trade paper. Dr. Doyle says the choicest moment of his life was when Thackeray patted him, a boy of five, on the head and praised him. His last book, called "Rodney Stone," has a good deal in it about the fistic science, which was in its prime about a century ago.

Messrs. Thacker, Spink & Co., Calcutta, publish a new edition of "The Indigenous Drugs of India," which has been produced by the Rai Bahadur, Dr. Kanny Lall Dey, in association with Mr. William Mair. Fifty copies of the book have already been purchased by the government of India. The work is dedicated with permission to the Pharmaceutical Society of Great Britain, of which Dr. Dey is an honorary member, and extends to over 400 octavo pages. It will be published in London within the current month.

Among the various devices now being tried to relieve Guy's Hospital, London, of its financial difficulties, is that of raising a sufficient sum to permanently endow a bed in memory of the poet Keats, who served a short time there as a medical student.

In Huxley's "Autobiography" he stands up for truth as greater than facts, and life than information. He says, "Life seems terribly foreshortened as they look back, and the mountain they set themselves to climb in youth turns out to be a mere spur of immeasurably higher ranges, when, with failing breath, they reach the top. But if I might speak of the objects I have had more or less definitely in view since I began the ascent of my hillock, they are briefly these: To promote the increase of natural knowledge and to forward the application of scientific methods of investigation to all problems of life to the best of my ability, in the conviction, which has grown with my growth and strengthened with my strength, that there is no alleviation for the sufferings of mankind excepting veracity of thought and of action, and the resolute facing of the world as it is when the garment of make-believe by which pious hands have hidden its uglier features is stripped off."

*The Medical Chronicle* is the title of the medical journal conducted by the faculty of the Owens College, Manchester. This college will open its winter session on October 2, and Mr. Jonathan Hutchinson has consented to deliver the introductory address, in the physiological theater of the new medical buildings.

Mr. C. C. Bell, in *Chemist and Druggist*, writes of the medieval names of drug plants. He says many of the English names occur also in Lyte, Gerard, Parkinson and the other old herbalists, and a considerable number are still in use, but these are not now in every case applied to the same plants as formerly. Gerard gives others of them in his list of obsolete names, but when these are deducted a good many still remain which had gone out of use before he wrote. Among these are some of especial interest. Donnhoof (spelt "donnhove") is one. It is the same as coltsfoot, "donn" or "dun" being an old name for horse, whence comes "donkey" or little horse. "Wowel" and "feldhove" are names given to the same plant. "Cetewale," which the glossaries give as English for "zodoar" (zedoary, a species of tumeric), appears in Lyte and Gerard as "setwall" a name for valerian; Chaucer, in "The Millere's Tale," names it along with licorice. Wermode in these glossaries means "wormwood" and is the correct form. Skeat explains it as "waremood" (preserver of the mind); Mr. Mowat, with greater apparent likelihood, says it is "waremoth" (preservative against moths). This certainly accords with the French *garde robe*, and with our old rhyme:

> "Where chamber is sweeped, and wormwood is thrown,
> No flea for his life dare abide to be known,"

which, however, Mr. Mowat does not quote. Wilde keyn, again (which appears in the glossaries under vicus quercinus, and is evidently an echo of the French qui de Chene), is not in Gerard. Other names calling for particular mention, some of which appear in Gerard and some not, are "groundswile" (ground-swallower), an appropriate name for so prolific a weed as groundsel; "wymalve" (French guimauve), for mallow; "hepebrede" (hip-bread, for dog-rose; "horse heal," for elecampane; marygold is called "yellebotel," or yellow-bottle. Shepherd's needle, which Gerard calls "ladies' combe," is glossed less flatteringly as "pouclesnedele," which, on the authority of a quotation in Halliwell, may be taken as equal to devil's needle; dandelion (dens leonis) as "doleronue;" hollyhock as St. Cuthbertscole; bryony as "wildnep;" burdock has given to it the name filantropos, because its seeds stick to men's clothes; duckmeat appears in a particularly interesting form as "cibus anatis, ang. enedechede" (a clerical error for "enedmete, "ened" being an old name for duck). Similarly "paddocstol" recalls the old name for frog or toad. "Cold as paddocks though they be, Here I lift them up to Thee," says Herrick's child of her hands in her "Grace before meat." "Aleon" are distinguished as of three kinds, cycotrium, epaticum and caballinum. Opium appears as "opium Thebaicum" (indicative of its geographic source), glossed "succus papaveris albi" and "opium miconis, succus papaveris nigri."

The entry immediately following this is a sad muddle, being "Opium quirrinacium, lesera, quilleya, succus iusquiami, idem." This is in "Alphita." In the "Sinonoma" "opium quirrinacium" is glossed "assfoetida idem;" what "quilleya" is, it is impossible to say; "iusquiamus" is henbane. This is only one instance of many hopelessly confused glosses. White, black and red poppies appear under their respective Latin names, and of the second we are told that diacodion is made. Nothing more is said of their use. Cowslip appears under "paralisis herba" as "cousloppe," meaning cowdung, a not very poetical name; "endyve" is under lactuca. The glosses on dracunculus are interesting as specimens of the fancifulness of our forefathers: "Draccuncia, asclepias, viperina, pentaria, serpentilla, colubrina, basilica (basilisk), cocodrilla (cockatrice), idem gallice et anglice, dragaunce" ("in English, dragons," says Gerard, who gives an equally long, but different, set of synonyms from Epuleius Barbarus). "Mandragora" as described at length are of two kinds, male and female; no other name is given to it. "Sene" (senna), again, has as yet no English form; and it is interesting to note that both these plants are mentioned by Shakespeare in the form here given. "Zinziber" also appears only in this form, and rhubarb only as reubarbarum.

## Hospitals.

**New Post Hospital for Fortress Monroe, Va.**—The Government will build a new hospital to cost about $20,000. Plans for the hospital have been received, and the work will be let by contract after thirty days' advertisement.

**Pennsylvania Hospital Annual Report.**—The managers of the Pennsylvania Hospital have issued their annual report, showing that in the Pine Street Hospital the patients remaining in May, 1895, numbered 210. New patients received in the year to May, 1896, were 2,408; remaining at latter date, 186; beds occupied, 2,618. A large amount of work was done by the out-patient department, the visits aggregating 46,197. In the department for the insane the figures for the year were: Women, new cases, 88; discharged, 82; remaining, 233; men, new cases, 77; discharged, 91; remaining, 181; total treated, 587; remaining, 414.

**A Cottage Hospital at Proctor, Vt.**—A new hospital at Proctor, Vt., was formally opened on August 8. It is a modern building, a short distance from the center of the town, and arranged to accommodate ten patients. The first story has an accident and operating room thoroughly equipped with modern surgical furnishings. One of the wards is also on this floor. The domestic and executive arrangements are all in the second story. The hospital has been built and equipped by the Proctor Marble Company; and while primarily intended for such of the employes as may need its services, it is to be open to any person in the village. The management has been placed in the hands of a committee of townspeople. The district nursing in the town, which is already completely established, is now to be done from the hospital by its training school. The attending physicians thus far appointed are Drs. J. M. Hamilton of Proctor and H. H. Swift of Pittsford.—*Boston Medical and Surgical Journal.*

## Philadelphia.

DR. B. MEADE BOLTON, Director of the Bacteriological Laboratory, wishes it to be distinctly understood that he is not responsible for the recent establishment of the plant in the City Hall for the manufacture of disinfectant solution, known commercially as electrozone. The tests which have been alleged to have been made in the city laboratory he states were not made by him or under his direction and that he has not had anything to do with testing, reporting or publishing anything in regard to the matter, which is understood to be under the supervision of the City Board of Health or some of its officials.

THE REPORT of the unsanitary condition of the League Island Navy Yard, arising from the fact that cases of typhoid fever have occurred recently in several vessels which had been fitted out at this place, has led to an investigation which is now in progress by the authorities at Washington. The Board of Health has not been able to find any case of typhoid fever at the station or within several miles of it. The water supply is not derived from the city pipes, but from cisterns filled with rain water so that the infection is not due to the use of water from the Schuylkill, and there is no great prevalence of typhoid in the city at present.

# THE PUBLIC SERVICES.

**Army Changes.** Official List of changes in the stations and duties of officers serving in the Medical Department, U. S. Army, from Sept. 19 to Sept. 25, 1896.

A board of officers is appointed to meet at the Headquarters Department of the Missouri, Chicago, Ill., on Monday, Oct. 5, 1896, at 10 o'clock, A.M., for the examination of such officers of the Medical Department as may be ordered before it to determine their fitness for promotion. Detail for the Board:

Lieutenant-Colonel Albert Hartsuff, Deputy Surgeon-General.
Major Henry Lippincott, Surgeon.
Captain Norton Strong, Assistant Surgeon.

The following named officers will report in person to the president of the examining board appointed to meet at Chicago, Ill., on Monday, Oct. 5, 1896, for examination for promotion:

First Lieutenant Henry C. Fisher, Assistant Surgeon.
First Lieutenant Henry A. Shaw, Assistant Surgeon.
First Lieutenant Charles F. Kieffer, Assistant Surgeon.

Major John V. Lauderdale, surgeon, will upon the arrival of Major Egon A. Koerper, Surgeon, at Fort Crook, Neb., repair to his home and await retirement.

Major James P. Kimball, Surgeon, is relieved from duty at Fort Wingate, New Mexico, and ordered to Fort Columbus, N. Y., for duty, relieving Major John Van R. Hoff, Surgeon. Major Hoff, on being thus relieved, is ordered to Vancouver Barracks, Washington, for duty, relieving Captain Rudolph G. Ebert, Assistant Surgeon. Captain Ebert, on being thus relieved, is ordered to Philadelphia, Pa., for duty as attending surgeon and examiner of recruits, relieving Captain William W. Gray, Assistant Surgeon. Captain Gray, on being thus relieved, is ordered to Fort Apache, Ariz., for duty relieving First Lieutenant Irving W. Rand, Assistant Surgeon. Lieutenant Rand, on being thus relieved, is ordered to Fort Clark, Texas, for duty.

**Navy Changes.** Changes in the Medical Corps of the U. S. Navy for the week ending Sept. 26, 1896.

September 23.—Passed Assistant Surgeon G. A. Lung, detached from the "Vermont" and ordered to the naval hospital, Chelsea, Mass.
Passed Assistant Surgeon H. D. Wilson, detached from the Chelsea, Mass., hospital and ordered to the "Bache."
Passed Assistant Surgeon G. H. Barber, ordered to the Naval Academy.
Assistant Surgeon M. K. Johnson, detached from the "Bache" and ordered to the "New York."
Assistant Surgeon F. C. Cook, ordered to the "Vermont."

### Change of Address.

Butler, T. J., from Chicago to Lockport, Ill.
Case, C. E., from Tacoma to Everett, Wash.
Johnson, C. W., from 625 Locust St., to 2309 Locust St., St. Louis, Mo.
Todd, F. Walton, from Coronado to Camp Capitola, Santa Cruz, Cal.
Taylor, P. K., from Kingston, R. I., to 211 W. 129th St., New York, N. Y.
Walsh, T. G., from 330 Grove St. to 369 Greenbush St., Milwaukee, Wis.
Wiggin, F. H., from Littlefield, Conn., to 55 W. 36th St., New York, N. Y.

### LETTERS RECEIVED.

Alta Pharmacal Co., St. Louis, Mo.; Allport, Frank, Minneapolis, Minn.; Adams, A. L., Jacksonville, Ill.
Bernd, Henry, St. Louis, Mo.; Bourns, F. S., Atlanta, Ga.; Benjamin, D., Camden, N. J.; Bumstead, J. E., Dundee, Ill.
Dewey, Richard, Wawatosa, Wis.; Drevet M'f'g Co., The, New York, N. Y.; Douglas, Richard, Nashville, Tenn.; DeCourcy, J. O., St. Libory, Ill.
Epley, F. W., New Richmond, Wis.
Feiel, A., Columbus, Ohio.
Galloway, D. H., Chicago, Ill.; Gradle, H., Chicago, Ill.
Hammond, J. C., Denison, Iowa; Hot Springs League, Hot Springs, Ark.; Hahn, H. H., Youngstown, Ohio; Haddock, W. J., Iowa City, Iowa; Hummel, A. L., Adv. Agency, New York, N. Y.; Higgins, F. W., Cortland, N. Y.; Hoffman, J. R., Ottawa, Ill.
Imperial Granum Co., Youngstown, Ohio.
Jegi, H. A., Arcadia, Wis.
Krebs Paul H., Cleveland, Ohio; Kibler, C. B., Corry, Pa.; Krause, Wm. C., Buffalo, N. Y.
Laughlin Pen Co., (2) New Haven, Ind.; Lautenbach, L. J., Philadelphia, Pa.
McBride, R. E., Gibson City, La.; Merrill, Wm. Stetson, Chicago, Ill.; Marchand, Chas., New York, N. Y.; Mizell, A. G., Chicago, Ill.; Mettler, L. Harrison, (2) Chicago, Ill.; Merrick, M. B., (2) Passaic, N. J.
Nelson, C. D., Greeley Colo.
Ozone Company, Chicago, Ill.
Parmele, Chas. Roome, New York, N. Y.; Pettit, J. W., Ottawa, Ill.
Rockey, A. E., Portland, Ore.; Reed, R. Harvey, Columbus, Ohio; Rosenberry, A. J., Wausau, Wis.
Schneider, August, Buffalo, N. Y.; Stowell, Chas. H., Washington, D. C.; Savage, G. C., Nashville, Tenn.; Spencer, John C., San Francisco, Cal.; Schieffelin, W. H. & Co., New York, N. Y.; Steele, D. A. K., Chicago, Ill.; Starr, G. L., Hudson, Ohio; Simmons, Geo. H., Lincoln, Neb.
Tyree, J. S., Washington, D. C.; Tuley, Henry E., Louisville, Ky.
Wilson, Cunningham, Birmingham, Ala.; Wilson, A. J., (2) Chicago, Ill.; Walton Oxygen Works, New York, N. Y.